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The history of rhythmic gymnastics for women

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Abstract

The study included three topics and a conclusion, the introduction included the research and its importance, which dealt with the history of the development of women's sports and the entry of women in many sports after it was not allowed to participate in them. It was its first Olympic participation in the gymnastics game in 1928, and the International Gymnastics Federation divided the gymnastic exercises into seven types. The practice of rhythmic gymnastics is restricted to women only, which is an important movement activity especially for its harmony with the natural biological characteristics of it. Rhythmic gymnastics performs on a mat similar to that used in Artistic Gymnastics. Therefore, the importance of the research lies in the researcher's attempt to study the rhythmic gymnastics in a historical study until it reached the Olympic Games, and accordingly the role it played in the development of the gymnastics. As for the first topic, it deals with the history of the gymnastics game, which requires a great physical effort, and an understanding of why the Greeks use it to develop the body and as a competition in the Olympics. Gymnastics was included in the first Olympic Games in 1896. But they were only men, and also took up rhythmic gymnastics is one of the most impressive and exciting women's sports in the world, and the many benefits of teaching rhythmic gymnastics. "Rhythmic gymnastics history is rooted in European traditions, in 1961; modern gymnastics was recognized by the International Gymnastics Federation. The first world championships were held in individual gymnastics in Budapest in 1963... In the first Olympic Games, they took place in 1984 in Los Angeles, where Canadian Laurie Fung became the first Olympic champion in modern gymnastics. As for the second topic, it dealt with the rhythmic gymnastics tools, with a historical overview and the material manufactured from them, a description of each instrument, a description of exercises with their difficulty, and the use of music with the kinematic chain and performance time. The third topic dealt with the Olympic Games and its years of hosting them in the countries hosting them and the individual and team results of the players and the participating countries with tables showing the individual and different results. As for the conclusion, it deals with the evolution of the rhythmic gymnastics game, the association of this type with women only, the development of tools during time and its attainment of what it is today, the Olympic competitions and the Russian players' excellence in it because of their physical strength, high flexibility and accuracy in performance

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Importance and introduction to the research

Women's sports developed in the late nineteenth and twentieth centuries until it reached its peak in the twenty - first century. Women participated in many sports after they were not allowed to participate in them. Also, women's sports today enjoy more public attention and attention than their male counterparts. And a game of gymnastics is one of the sports that women are deprived from participating in its competitors, and was the first participation of Olympic for her in 1928. The International Federation dictated by FIG has divided the exercises gymnastics to seven types, namely gymnastics artistic gymnastics year, trampoline, and acrobatic as well as aerobic and parkour, these types six of gymnastics practiced by both the male and female ,. The practice of rhythmic gymnastics is restricted to women only, which is an important movement activity especially because of its harmony with the natural biological characteristics of them, and girls can practice this sport because it is characterized by the aesthetic character, which is reflected by linking the skills and movements of the dance, acrobatic and the art of ballet with music , as it expresses the beauty of the movement and its harmony Streamlined, rhythmic gymnastics combines artistic gymnastics with dance with the use of a hand-held instrument. This device could be a ball, a sign, a hoop, a ribbon, or a rope. The rhythmic gymnastics is performed on a rug similar to that used for floor movements. Therefore, the

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importance of research lies in an attempt researcher yen study of a historical study of rhythmic gymnastics to their arrival to the Olympic Games and thus to the role played in the development of gymnastics. Therefore, the researcher section of his research into three sections studied the first section of it the history of sport gymnastics and rhythmic gymnastics in the second topic tools studied and rhythmic gymnastics, the third topic dealt with the results of the Olympic competitions.

Literature review

1- History of the gymnastics game

It is important to know the history of your gymnastics, such as this very physically demanding game, it is easy to understand why the Greeks used it for body development and as a competition in the Olympics. But gymnastics did not originate in Greece. Gymnastics is believed to have originated for the first time in Egypt as a means of entertainment for the pharaohs as early as 5000 BC. " (Dupuis, 2005) "It is believed that gymnastics Acrobatic girls Egyptian have important cultural great, where, was dancing aside essential in the rituals of religious, and has the effect of a large " (Sakran; 2017)

Gymnastics spread to the Greeks, who modified it into a mechanism for training in sport and combat. Because of its severe physical nature, the Romans adopted gymnastics from the Greeks to help train their soldiers. It has been said that the actual word for gymnastics comes from the Greek gymnasium, which literally means "to exercise naked. Olympic participants were required to be naked in order to prevent men from wearing women's clothes and women from entering the gymnasium. After the Greek and Roman times, you lost your gymnastics." their popularity. physical prowess became only. This continued until the beginning of the Renaissance, when all sports began to restore popular. Conveniently, because of its history, has been included in the first gymnastics Olympic Games in 1896 but they were only men compete... (Dupuis, 2005)

In the year 1896, the exclusion of women from the games, which were considered for males, as was in Greece old. In the Games in 1908 in London, it was the ratio percentage of players 2 in percent. Since that time, it increased the proportion of women slowly but steadily to reach to more than 42 in percent in the Games Beijing in the year 2008, but even in 1928, has been excluded women from games sports that involve the effort is clear, or the strength of physical or touching physical. For good luck change this is positive in contracts coming. The first sports group participated in which women in the Games Olympic in 1964. Football hand ball basketball in the year 1976, football in the year 1996 and the hockey ice in the year 1998. In the year 1984 was the inclusion of riding bikes and marathon in the program of women., In addition to Rhythmic gymnastics.

Sports are one of the most powerful platforms to promote gender equality and the empowerment of women and girls .As the leader of the Olympic movement, the International Olympic Committee has an important responsibility to take action when it comes to gender equality - a fundamental human right of profound importance and a fundamental principle of the Olympic Charter. (El-Ghazaly, 2018)

1-1 rhythmic gymnastics

Rhythmic gymnastics is a feminine system characterized by handling light portable objects such as jump ropes, hoops, and braces. The strips, according to a precise technique defined by the regulations and directly related to the simultaneous execution of gymnastic exercises such as transitions, jumps, turns, pivots and exercises in flexibility (excluding acrobatics). In addition, accompaniment must be music when performing exercises. And rhythmic gymnastics is one of the most fascinating and exciting women's sports in the world. The recognition of it as an event common and enjoyable to the public in around many of the world, gymnastics rhythmic integrates the beauty of the movement of dance and music with movements challenging and awe - inspiring ropes and hoops and balls and pillars and tapes.. (Schmid, 1984)

One of the many benefits of teaching rhythmic gymnastics. You can identify three areas different for the development of skills: the development of skills and physical, such as flexibility, balance, strength, and endurance of during pregnancy overload for many of the systems of the body. The strengthening of capacity motor, such as coordination between the hand and the eye and the time of response reaction, from by dealing with ropes and pillars balls, ribbons, flags, sticks, hats and other. • strengthen the capacity of cognitive including in that creativity and solving problems and making decisions. • The development of skills and social, such as awareness of the social, of through working with partners or in groups small. (Klentrou, 1998) The following figure shows some of the tools used (DIOLEWIS, 1862)

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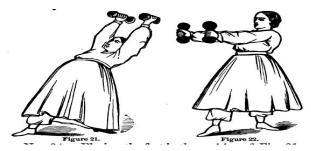


Figure (1) shows some of the tools used

And "indicate the roots of contemporary gymnastics rhythmic to centuries 1 8 00 and 1900, from through the ideas of the French Jean - Georges Nofar, François Dlsart, and Rudolph the iPod, who believe in the expression of the movement and the practice of sport. The development of sport owes much to the ballet classic, side - to - side With the traditional German system of using machine work for muscle development and the Swedish method of free exercise to develop rhythm . Isadora Duncan presented in the final portion of her dance, which is credited to her (Mother of Modern Dance) as she brought freedom of expression and creativity to the rhythmic gymnastics that defines discipline today. This sport found its first home. It is competitive in the Soviet Union. Also, "The history of rhythmic gymnastics is rooted in European traditions and extends to the beginning of modern gymnastics. The sport of gymnastics arose out of the Swedish style of free practice developed by Per Henrik A. Ling in the early nineteenth century.". Ling's concept of theological aesthetic practices encouraged students to stimulate their feelings and emotions through flexible movements of the body in the form of group exercises. In 1911, Emile Jacques-Dalcross invented a system eurhythmics, A system of rhythmic exercises and music to express the rhythm of the music, the Medau School was founded in Berlin in 1929 to train new leaders in what was then called modern gymnastics.. At the same time, a kind of rhythmic gymnastics began to appear as balls, strings, ropes and hoops. The sport eventually progressed to include a competitive focus as a degree of difficulty was given to specific skills. These are the founders of your modern gymnastics, and it is now your rhythmic gymnastics, (Palmer, 2003) Likewise (the roots of modern gymnastics, which were called in the name of artistic gymnastics until 1969, can be found in various historical aesthetics and systems of rhythmic gymnastics or dance and in ballet schools at the turn of the nineteenth and twentieth centuries. At the beginning of the creation of the modern sport of gymnastics, the concern of girls and women was a link between aesthetic gymnastics and sports competition. The concept and movement of this sport was greatly influenced by the great personalities of the time in the field of choreography and rhythm. Most notable was the Swiss theater choreographer Emile Jacques de Calrose, who created the principles of rhythmic gymnastics. American physician Bas Mindenick also focused on the health of the female body according to anatomical and physiological knowledge.. Modern gymnastics as a purely female sport began taking shape in the former Soviet Union of Soviet Socialist Republics in the 1930s and was inspired by the classical ballet technique from the start. At the same time, however, other modern sports schools have been established, especially in Bulgaria, where modern gymnastics has been more athletic.. In Europe, modern gymnastics officially began to take shape in the early 1950s, under the great influence of the historical and political causes of the Soviet regime. From the Soviet Union, a system was practiced with tools and without tools. Membership began to grow and the experience of coaches and judges improved. There was an increase in the level and performance of the contestants. The musical training was accompanied by piano accompaniment that improved the performance of the gymnasts. In 1961, modern aesthetics was recognized by the International Federation of Ethnologists. The first World Championships was held in the individual gymnastics in Budapest in 1963. competed in the dual - set free without tools and a tool of the ball and a year later, has been identified this race in the World Cup (World Championship) and the winner of the first time Ludmilla (USSR). Competed 10 countries and 28 competitors. The aim of this tournament was to unify the various gymnastic directions and to reduce the acrobatic elements. Four years later.. In the first Olympic Games, where it has been modern sport gymnastics, signed in 1984 in Los Angeles, where the Canadian Lori Fung became the first champion of Olympian of the modern gymnastics. Joint formation was first introduced in LOH (Summer Olympic Games) after 12 years in 1996 in Atlanta, where a team of players won data gymnastics Spaniards Since then, she has regularly competed in all Summer Olympics in both the singles and teams category). (Korytová, 2016)

From the foregoing in this topic the researchers see that excluding women from practicing the gymnastics game and not participating and representing them in the Olympic Games except in 1928, and after World War II and with the development of sports, the gymnastics competitions moved to the closed indoor halls, and in the beginning the seeds of (modern gymnastics) that emerged At the beginning of the eighteenth and nineteenth century Swedish movements, and with the change of society's view of sport as a platform for changing gender equality is the beginning of naming your rhythmic gymnastics, which differs from your artistic gymnastics as the latter does not have acrobatic movements but rather jumps and movements of grace and beauty with hand-held tools It is derived from ballet, which is a game for women because dancing or artistic performance with music is something more inclined to females than males,

ISSN: 1475-7192

1- A tool for rhythmic gymnastics

Rhythmic gymnastics is unique in your gymnastics, being the only one to include a handheld instrument in all the motor chains. The five devices used with percussion are: rope, hoop, ball, braces, and straps. (Kerr, 2010)

As for "the music used in your rhythmic gymnastics is not only a form or a style. Therefore, it is said that music is the soul of your rhythmic gymnastics. The music in your rhythmic gymnastics can be a piece of piano or symphony. A variety of popular music is also widely used. Dictated by FIG rhythmic must go well with the rhythm and style movements. To be at selected according to brain plans player is transporting the tool used for the transfer is understood and m full technical and will remain. It cannot be music with melody graceful style featured only stimulate a passion for the player and make their personality is outstanding, but also enhancing the artistic appeal and gaining a performance atmosphere. All of these will surely impress the audience. "(Luo, 2015) the rules and requirements for the use of tools are very precise, as each tool needs physical and mental characteristics. As for ropes, they need explosive force in jumps, steps and transfers. As for the ball, it is the nicest and most lyrical, and perhaps the easiest tool to perform, while the signs test the compatibility of the gymnast, with the straps, the player needs compatibility and ingenuity to create wonderful color pictures in the air. Or dealing with the ring requires the work of greater technical skills, were pillars and balls are made in the origin of the wood, and the hoops of rubber and cords of hemp, satin ribbons: The tools talk of T CAD T universe always made of synthetic materials, such as plastic.

He states that in the eighteenth century, "the logs were made of solid wood, about eighteen inches long, and three or four inches in diameter. Women could train with the notch with music easily and use it in the classroom as such slow tunes. (Stubbs, 2011)

Involves gymnastics only on the performance of movements style dance similar to a series of technical performance dictated by FIG for women, lead skills side - to - side with the tool and music Rhythmic gymnastics includes two types of competitions: individual and team. Competitions individual include player gymnastics with a single tool to perform a series of 90 seconds with the music. Group of 5 persons with 5 inductors, which may be the same instrument or different, Held competitions gymnastics rhythmic in the halls that should be a height of 9 meters at least, where you should be the throw tool used high and picked for the recording points; However it, the nature is unstable very equipment means that the rhythm is not can that happen more effectively in places external where will not be there any restrictions in the height of the ceiling, because the rain and wind will affect the tools. As is the case in gymnastics artistic, where he asked the men and women performing types different from the elements on the devices different, the gymnastics to rhythmically his requirements similar In chains motor, should the players gymnastics rhythmic that a number great of hops, the ball must to show flexibility amazing, the cord must to prove a set of scales, in the tape need to perform axes or junctions, and in the ring is also required to show a combination of all These movements and "practiced by Greek ancients as well as many of the peoples and cultures of other games acrobatics with or without equipment (strips, balls, ropes, sticks etc.) (Frantzopoulou, 2011)

1- Tape

"The tape consists of two main parts, the stick and the tape, and between them is a chain made of a metal material that allows easy movement in different directions." (Attiyat, 2014)

This instrument belongs to the most difficult one to use in your rhythmic gymnastics . The length of the ribbons is 6 meters, the width is 4-6 cm, and the length of the stick or rod is from 50 to 60 cm. In spite of this must continue the constant movement of the bar, which must be not touch the carpet and even the body of the player gymnastics, and therefore it expresses discipline in gymnastics modern . Typical movements are spirals, circles, and throws

2 - Hoop exercises

"Thanks to the German (Midaw) in the introduction of (the collar) as one of the tools used in exercises in the year 1830, and at the present time the hoop is frequently used in weight training exercises, in addition to throwing exercises and stopping the hoop to upgrade the ability to neuromuscular harmony, develop flexibility and improve Texture, especially when performing different movements with the hoop holding hands apart. "This tool is easier and often what is the first tool to start by player's gymnastics young. Performance and typical training on all hoops from throwing and grabbing and it is to determine the size of the ring of through the length of Aabth gymnastics as well as must be the weight of compulsory 300 grams. (Attiyat, 2014)

"It spread and became popular at the beginning of the nineteenth century after its first official appearance at the Opening Show of the Tenth Olympic Games in Germany in 1936 in the city of Yerlin. (Korytová, 2016) The following figure shows some of the movements in the nineteenth century (Amira, 2010) (Bowen, 1909)

ISSN: 1475-7192



Figure (2) shows some of the movements in the nineteenth century for the hoop

3 - Ball exercises

Thanks to professors exercise (Bouda) Swiss and (Medao) German in the introduction of (football exercises) as one of the tools the task that used significantly in the exercises INSAT different ball exercise balls used in sports as it is a ball of rubber (rubber) Its diameter is 18-20 cm and its weight is $400 \, g$. It is predominantly used in ball throwing and stopping exercises from which the rolling and dribbling exercises are derived. It is also used in the performance of swing and rotation exercises with one arm or two arms. They are transitional movements that often link the movements of throwing the ball. (Attiyat, 2014)

"The ball with tape is one of the most difficult tools because it emphasizes flexibility, agility, fluency and smooth movement ... The ball size is 18-20 cm in diameter, the specific weight is 400 grams." (Korytová, 2016)

4- Rope exercises

"It is thanks to (Gotts) and (Friedrich Ludwig Jahn) to insert the ropes into the hand tools in the exercises, as (Goetz Moats) around 1838 wrote a whole chapter of some exercises using love in the purpose exercises in some games such as boxing and strength games, but not It is used in the exercise, especially in the movements jump and weighted only since 1920" (Attiyat, 2014)

5 - Exercising with mace (wooden bottles)

"It is said that the Persians were the first to use wooden bottles in physical exercises, then the British took them to Europe, where their use spread, especially in physical exercise and small games.

At first bottles of wood were voluminous as to be used in the arms rotation movements using the strength of the muscles of the shoulders and torso and in the movements of different swings and over time, taking its size and thickness decreases gradually wood and bottles currently used in the physical exercise of the Misses length 42 cm in diameter and 3 cm of the top and bottom of 4 cm and weighing what between 280-450 grams "(Attiyat, 2014)

And "usually what are pillars fast too and require movements quick and accurate, such as windmills movements and non - identical movements and throw one of them and to stop it, and the pillar length is 40-50 cm and weight of each pillar is 150 grams" (Korytová, 2016)

And the following figure in the nineteenth century shows some movements Balashaqih (Bowen, 1909)

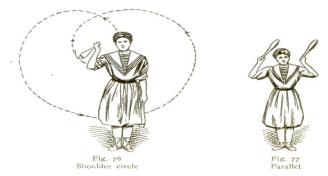


Figure (3) shows some movements with signs

From the above section notes that the gymnastic tools rhythmic, that it is necessary to performance in the competition and the player to the extent of showing consistency with the tool and the compatibility and harmony in the movements, as though the form and industry tools have evolved with the great development of global sports altering the size of the ball and ring wands And the tape and the quality of the rope material industry, which increased the rhythmic gymnastics game aesthetics and more distinction, as well as notes the great change in the players 'clothes, which gave them great freedom to perform movements with grace, compatibility and flow to perform difficult movements with the tool used , which made it fun to watch it in the Olympic Games and global competitions very high

ISSN: 1475-7192

Olympic Games

In the first Olympic Games, where it has been modern sport gymnastics, signed in 1984 in Los Angeles, where the Canadian Lori Fung became the first champion of Olympian of the modern gymnastics. Joint formation was first introduced in LOH (Summer Olympic Games) after 12 years in 1996 in Atlanta , where a team of players won data gymnastics Spaniards Since then, she has competed regularly in all the Summer Olympics, both in the singles and teams category .(Korytová, 2016)

As a Frkie Russia has maintained the top of the first place in most of the Olympics, but the Games 1996 Atlanta course Russia has made third place Frkie after the Bulgarian team a second and Spain won the first place and since then, Russia is the first Frkie in all sessions that followed the 1996 Atlanta cycle and not No Asian, American, African, or Arab team had advanced results except in the Olympic Games that were held in Beijing 2008, China won second place in teams after the LR and C team, and the Belarusian team came third. In the last Olympic Games 2016, Rio de Janeiro, Spain returned to competitions and won Second place after the Russian team and Bulgaria came in third place. The researcher believes that the competition circuit was confined to European countries only, and the reason is the emergence of this sport in it and the physical structure of European girls helped this type of gymnastics and good economic and cultural conditions. These differential results only and the following table show the teams results for the Olympic Games.

Table (1) it shows the Olympic team results of the teams participating in your rhythmic gymnastics

	Atlanta1996		Sydney 2000		Athens2004		Beijing2008		London2012		Rudi 2016	
T	Count	Clas	Count	Clas	Count	Clas	Count	Clas	Count	Clas	Count	Clas
	ry	s	ry	S	ry	s	ry	S	ry	s	ry	S
1	Spain	38,9	Russia	39.5	Russia	51.1	Russi	35,5	Russi	57,0	Russia	36.2
		33				00	a	50	a	00		33
2	Bulga	38,8	Bulga	39.	Italy	49.4	China	35.2	Belar	55.5	Spain	35.7
	ria	66	ria	5		50		25	us	00		66
3	Russia	38,3	Athen	39.2	Bulga	48.6	Belar	34.9	Italy	55.4	Bulga	35.7
		65	s	83	ria	00	us	00	,	50	ria	66

As for the results of the singles year , in the 1984 Olympic Games in Los Angeles, Canada ranked first through Lori Funk, and no player from the Canadian team won after these eight Olympic Games that followed the 1984 to 2016 Games in Brazil, and gymnastics has a bias. Senior "then "the International Gymnastics Federation, in cooperation with Longinus University and the University of Neuchatel, designs and implements an improved statistical program to analyze the performance of gymnastics judges during and after major competitions such as the Olympic Games and the World Championships. This program, called the Judges Appraisal Program, includes three objectives: (1) Provide constructive feedback to judges, executive committees and national unions; (2) Appointing the best judges for the most important competitions; and (3) disclosure of bias and outright fraud. "Mercier, 2017 ((1))Researcher Wen believes that Canadian player Laurie Fink won the gold medal, since the tournament was held on its home soil and the result was to satisfy the host country. Otherwise, we did not see in the eight tournaments after the 1984 Los Angeles Games to Rio de Janeiro 2016 any mention of Canadian players, neither team nor individual in general. The most stability and excellence are the players of Russian and Bulgarian and of Spanish and Frenchwomen for the following table shows the results of the year of individual competitions in the Olympics.

Table (2) shows the results of the individual Olympic Games for the female athletes participating in the rhythmic gymnastics tournaments

Lo	os Sit 1984		Seoul 1988		Barcelona 1992		
Player's name Count			Name the player	Count	Name the player	Country	
ry				ry			
1	Lori FUNG	CAN	Marina LOBATCH	URS	Aleksandr	EUN	
		39.05		60,000	a TIMOSHENKO	58.100	
2	Doina STAICULE	ROU	Adriana	BUL	Carolina	ESP	
	SCU	38.65	DUNAVSKA	59.950	PASCUAL	57.912	
3	Regina WEBER	FRG	Aleksandra	URS	Oksana Skaldina	EUN	
		38.90	TIMOSHENKO	59.875		57.912	
Atlanta 1996			Sydney 2000		Athens 2004		
1	Ekaterina	UKR	Yulia BARSLUKO	RUS	Alina KABAEVA	R	
	SEREBRYANSK	39,68	VA	39.632		US	
	AYA	3				108.400	

ISSN: 1475-7192

2	Yana BATYRCHINA	RUS 39,38 2	Yulia RASKINA	BLR 39.548	Irina TCHACHINA	R US 107.325	
3	Elena VITRICHENKO	UKR 39,33 1	Alina KABAEVA	RUS 39.46 6	Anna BESSONOVA	UKR 106.700	
Ве	eijing 2008		London 201 2		Rio de Janeiro 2016		
1	Evgenia KANAE VA	RUS 75.500	Evgenia KANAEVA	RUS 116.9 00	Margarita MAMUN	RUS 76.483	
2	Inna ZHUKOVA	BLR 71.925	Daria DMITRIEVA	RUS 114.50 0	Yana KUDRYAVTSEV A	RUS 75.608	
3	Anna BESSONOVA	UKR 71.875	Liubou CHARKAS HYNA	BLR 111.70 0	Ganna RIZATDIN OVA	UKR 73.583	

Conclusion

From the above, we clearly see the development of the rhythmic gymnastics game for women and the link of this game with them because of this game's high technical physical performance linked to the technical aspect of performance with dealing with the tools used on the impact of special musical rhythms, and Europe embraced this game and distinguished itself and will remain a forerunner for everything new as it linked ballet dance to this Sports, since ancient times, tools have been used with dance. Each country has a special culture with its folkloric dance, and used rhythm with dance and movement. Some of these tools have developed into what we are today from the last form in the rhythmic gymnastics game.

It is also difficult to evaluate the performance of the players and establish a mandatory law in the performance to obtain high technical performance with or without dealing with the tools. The tools used, the ball, the hoop, the ropes, the straps, and the signs were modified, whether in their shape or on the material of manufacture.

As for the Olympic competitions clearly see the high technical side of the players Russian because enjoyed strong physical and high flexibility and precision performance and highly trained, and was the discriminate game in European countries and confined to the centers of the first three out whether a team or an individual year as well as the finest female athletes participating in courses The first Olympic women of this game are practicing in their own countries, adding their experience to new players and developing the law of the game as well as the technical committee establishing international law for your rhythmic gymnastics.

References

- 1. Amira Abdul Wahid, Shaima Abd Matar, The Foundations of Teaching Rhythmic Gymnastics (Baghdad, Al-Noor Press, 2010)
- 2. Jamal Sakran; the historical development of artistic gymnastics equipment and law for men up to (2017) and its impact on the level of movement difficulties (PhD thesis. College of Physical Education and Sports Sciences / University of Baghdad: 2018).
- 3. Attiyat Muhammad Khattab, and others: Basics of exercises and rhythmic exercises, 2nd Edition (Cairo, Book and Publishing Center, 2014)
- 4. Dio Lewis, Men, women, and children trans-lation of prof. kloss's dumb-bell instructor and prof. sohreber's pangymnastikon. (bos-ton: ticknor and fields.1862) p81
- 5. Dupuis, Colleen M. "A close look at the applications of physics in the sport of gymnastics: a literature review and analytical examination: honors thesis [(HONRS 499)]." (2005
- 6. El- Ghazaly, Yasmeen. "Moral and cultural discourses surrounding women athletes in Egypt." (2018). Schmid, AB (1984). Rhythmic Gymnastics: New Olympic Sport. Journal of Physical Education, Recreation & Dance, 55 (5), 1
- 7. Frantzopoulou, Aikaterini, et al. "Acrobatic gymnastics in Greece from ancient times to the present day." Stud Phys Cult Tour 18.4 (2011):
- 8. Kerr, Roslyn Fiona. "Assembling High Performance: An Actor Network Theory Account of Gymnastics in New Zealand to (2010).
- 9. Klentrou, P. (1998). The Educational Face of Rhythmic Gymnastics. Journal of Physical Education, Recreation & Dance, 69 (9),
- 10. Korytová, Ludmila . " Popularita moderní gymnastiky v Milevsku ." (2016)
- 11. Korytová, Ludmila . " Popularita moderní gymnastiky v Milevsku ." (2016)
- 12. Mercier, Hugues , and Christopher Klahn . Judging the judges: Evaluating the performance of international gymnastics judges. (2017).

ISSN: 1475-7192

- 13. Palmer, Heather C. Teaching rhythmic gymnastics: a developmentally appropriate approach. Human Kinetics, 2003p3
- 14. Stubbs, Ray. The Sports Book. Dorling Kindersley Ltd, 2011
- 15. WP BOWEN the Teaching of Elementary School Gymnastics FOURTH EDITION. FA BASSETTE Co. 1909
- 16. Lewis, Dio. The New Gymnastics for Men, Women, and Children: With a translation of Kloss's Dumbbell Instructor and Schreber's Pangymnastikon. Ticknor and Fields, 1862.
- 17. Luo, Qi. Advances in sports engineering and technology. CRC Press, 2015.