

THE EFFECT OF WET CUPPING ON FLEXIBILITY DAILY ACTIVITY LIVING AND PAIN AMONG KARATE PLAYERS IN JORDAN

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Abstract

This study aimed to identify the effect of using wet cupping on improving flexibility, ability to perform daily activity living, degree of pain for karate players in Jordan. The researcher used the experimental method for one group of 20 karate players.

To measure the dependent variables, the numbered flexibility box, a measure of the daily activity living, and a scale of pain, were used.

Applying the pre measurement for the study variables, then the study sample underwent a wet cupping session a month later the sample underwent a second wet cupping session. After (3) days of doing the second session of wet cupping, post measurement were applied to the sample, the t-test was used as a statistical method to compare the pre and post.

The results showed that there were statistically significant differences at the level ($\alpha \leq 0.05$) between the pre and post-measurement in favor of the post-measurement in the variables: flexibility, ability to perform daily activity living, degree of pain

The study recommended the use of wet cupping for its positive effect in improving flexibility, increasing ability to perform daily activity living, relieving the degree of pain, and conducting follow-up studies on the same category to identify the extent of the continuing positive effect of wet cupping.

Keywords: Wet cupping, Flexibility, Daily activity living, Pain, karate players, Jordan.

Resumen

Este estudio tuvo como objetivo identificar el efecto del uso de ventosas húmedas en la mejora de la flexibilidad, la capacidad para realizar las actividades de la vida diaria y el grado de dolor de los karatecas en Jordania. El

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investigador utilizó el método experimental para un grupo de 20 karatecas.

Para medir las variables dependientes, se utilizó la caja de flexibilidad numerada, una medida de la actividad de la vida diaria y una escala de dolor.

Al aplicar la medición previa a las variables de estudio, la muestra del estudio se sometió a una sesión de ventosas húmedas; un mes después, la muestra se sometió a una segunda sesión de ventosas húmedas. Después de (3) días de realizar la segunda sesión de ventosas húmedas, se aplicó la medición posterior a la muestra; se utilizó la prueba t como método estadístico para comparar las mediciones previas y posteriores.

Los resultados mostraron que hubo diferencias estadísticamente significativas a nivel ($\alpha \leq 0,05$) entre la medición previa y posterior a favor de la medición posterior en las variables: flexibilidad, capacidad para realizar las actividades de la vida diaria, grado de dolor.

El estudio recomendó el uso de ventosas húmedas por su efecto positivo en la mejora de la flexibilidad, el aumento de la capacidad para realizar las actividades de la vida diaria, el alivio del grado de dolor y la realización de estudios de seguimiento sobre la misma categoría para identificar el alcance del efecto positivo continuo de las ventosas húmedas.

Palabras clave: ventosas húmedas, flexibilidad, actividades de la vida diaria, dolor, karatecas, Jordania.

Introduction

Cupping is one of the ancient alternative medicine methods, which people used to resort to get rid of diseases, and it is a therapeutic process that uses sterile special cups, to rid the body of unhealthy and useless blood and rid it of blood impurities.

Cupping depends on the principle of stimulating the body's blood circulation, a method taken from the honorable Sunnah of the Prophet, and the Arabs have used it since ancient times, and the Prophet Muhammad, peace be upon him, urged it, because of its health and preventive benefits for the body from diseases, and its stability was mentioned in the Sunnah in many authentic hadiths. On the authority of Ibn al-Abbas, may God be pleased with them, on the authority of the Prophet, may God's prayers and peace be upon him, he said: (Healing is in three: a drink of honey, a cupping dash, and cauterization of fire, and I forbid my nation from cauterization) Narrated by Al-Bukhari and Muslim.

Cupping is a very ancient therapeutic method that has been used since the ancient Pharaonic and Chinese civilizations before about (4000-5000) BC, and today this method is known as traditional Chinese cupping, as cupping has passed through the ages between promotion and development on the one hand and imitation on the other. The loss of a lot of information and facts about how cupping was used in ancient times, so only some simple information remained in terms of the pharaonic stone drawings and Chinese inscriptions on wood panels, which confirmed the widespread use of it as a healing method in the Pharaonic and Chinese civilizations (Icaev, 1996).

There are two main types of cupping, they are dry cupping, which is a process that forms blood congestion in the desired location on the skin by a special cup without making any wounds, and is often done in places of pain, and wet cupping, which is the same dry cupping followed by making superficial wounds on the skin, then returning the cupping cup again Then aspiration of blood (Adam, 2011).

Al-Shehri (2006) mentioned two types of cupping: preventive cupping, which is done for the sake of prevention, which is known today in Arab countries as prophetic cupping. These places are clearly in the narration of Anas bin Malik, may God be pleased with him, where he said: The Messenger of God, may God bless him and grant him peace, was cupping on the cheeks and on the shoulders, and he was cupped on the seventeenth, nineteenth, and twenty-first. Narrated by Al-Bukhari and Muslim, Adam (2011) also confirms that there are In these particular areas the slowest surface circulation rate ever, the second type is therapeutic cupping, which is carried out with the aim of treating diseases, and is widely used in many countries of the Asian continent, such as China, Korea, Thailand, and Japan, and its information about the sites of cupping is derived from the map of nerve points on the body according to Chinese medicine.

Because cupping was used by athletes who showed red circular spots in the Rio Olympics (2016), such as Olympic swimming legend Michael Phelps and gymnast Alex Nadro, these athletes who practice cupping confirmed that it is an effective method in accelerating the recovery process from training and competition fatigue, and treats Many diseases facilitate blood flow in the body and relieve muscle pain resulting from training and competitions, and it is a safe, easy and inexpensive process, and it activates the vital functions of the various body systems, and this is what the athlete and coach need to achieve the best levels (Al Kaabi, 2017).

Saleh (2007) defined sports cupping as codifying the applications of cupping

with athletes using it in first aid, rehabilitation and speed recovery to achieve the best sports form, as it aims to achieve recovery, relaxation, restore vitality and help maintain strength and flexibility.

Dry cupping, wet cupping and cup massage (massage cupping) are the most commonly used forms of cupping in the sports field.

Determining the dose of sports cupping is subject to many variables that are taken into account by the therapist who follows the case, but the main need is to use cupping repeatedly with an interval that takes into account the circumstances of each case. Those used in rehabilitation, and the method used in rehabilitation differs from that used in restoring recovery. These matters are largely due to the discretion of the therapist after an in-depth study in this field (Saleh, 2007).

Study problem

Through the experience of working in the field of cupping for a long period of time, in addition to working in the field of karate, it was noted that many novice athletes suffer from general fatigue in the body and many muscle pains that affect their ability to perform daily activities, and that these pains may negatively affect On the flexibility of the muscles and the spine, as these players resort to absenteeism and non-compliance with training.

By looking at some previous studies related to cupping, such as Farhadi, et al (2008), AlBedah, et al (2015) Al Jaouni, et al (2017), it was found that no scientific studistalked about the effect of using wet cupping on flexibility, Doing daily activity living and the degree of pain among karate players in Jordan.

Study Importance

The results of the study may contribute to providing an ancient treatment method in a modern and effective scientific way for athletes

Study hypothesis

There are statistically significant differences at the level ($\alpha \leq 0.05$) between the two measurements, pre and post, in the effect of wet cupping on Flexibility, Daily Activity Living and Pain among Karate Players In Jordan.

Terminology of study

Wet cupping: It is a medical, curative, surgical procedure with a classification of minor surgery (code: 5.3.2) as mentioned by Al-Shehri (2006) in the World Health Organization report in 1998, during which cups are placed in the chosen places for a period ranging from (5-30) seconds, then superficial cuts are made in the places of the cups, then the cups are returned to their places in order to suction the blood,

According to Chinese medicine, the cup of cupping is placed on the nerve points, then removed and superficial wounds are made in the place of the cup, then the cup is placed again (El Sayed, et al, 2013).

Daily Activity Living: It is a scale graded from zero to two to indicate the extent of a person's ability to do daily activity, by giving a score (zero) for the inability, a score of (1) for the average ability and degree of (2) for the natural ability (Majli et al., 2007)

Pain Score: It is a test scales to measure the degree of pain, including (six scores (0-5), decimal scores (0-10) and the graded pain score percentile test (0-100) (Kharrabeh, 2018).

Flexibility: It is the individual's ability to perform movements to a large extent without the occurrence of ruptures, whether in the ligaments or muscles, and is divided into two types: general flexibility, which is the individual's ability to perform movements in a wide range in all joints according to their types, and special flexibility, which is the ability to perform movements in a wide range in the direction The aid required for physical or athletic performance (Bani Hani and Al Widy, 2006).

Methodology

Study method: the experimental method for one experimental group and the comparison between the pre and post measurement.

Study population: Karama Karate Sports Center players registered in the club's statements for the year (2020-2021), and their number is (40) players.

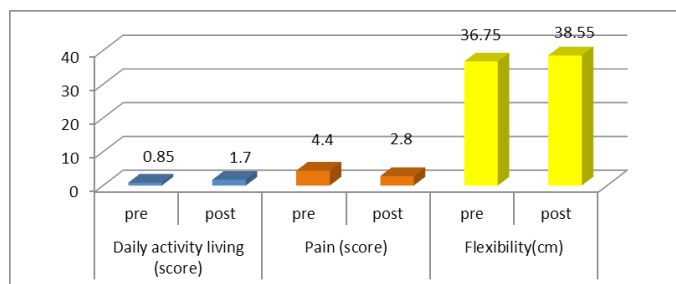
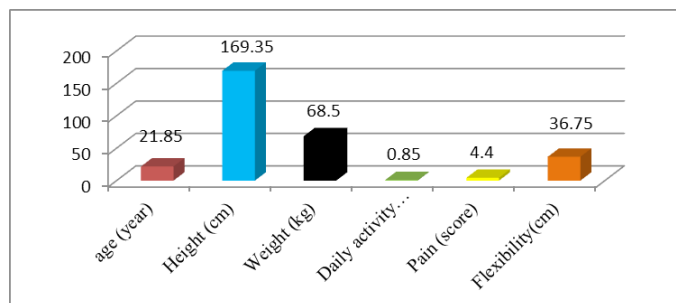
Study sample: The study sample consisted of (20) novice players of Karama Karate Sports Center and a percentage of (50%) of the total study population, they were chosen by random method (sample description in (Table 1)).

Require the sample members to:

1- The approval of the players' specialist doctor to participate in the study, after conducting the appropriate medical examinations.

Table 1. Describe the study variables in the pre measurement.

Variables	Number	Mean	Standard deviation	Skew coefficient
Age (year)	20	21.85	2.925	.473
Height (cm)	20	169.35	7.492	-.383
Weight (kg)	20	68.50	9.412	.011
Daily activity living (score)	20	.85	.587	.004
Pain (score)	20	4.40	2.303	.286
Flexibility(cm)	20	36.75	6.348	-.428



- 2- Not to undergo any other treatment methods during the application of the study.
- 3-The player has a good degree of health.
- 4-Not to donate blood before (6) months from the start of the study.
- 5- Not to undergo any surgeries before (6) months from the start of the study.
- 6- Not taking medications continuously and not having chronic diseases.
- 7- The absence of any problems in the locomotor system.

- 8- The absence of any problems in the spine.
- 9- Players are free of any disease
- 10- Voluntary to undergo the study.
- 11- That the height is proportional to the weight.
- 12- That the players suffer from training pains and the inability to carry out daily activities normally.
- 13- The players did not undergo any exercises that improve the flexibility of the spine during a period of time studying.

These conditions were verified by asking players by filling out a special form and not through medical tests.

Study tools

- 1- A special form for collecting data on the sample members.
- 2- A device for measuring height in centimeters and weight in kilograms.
- 3- Medical cupping cups.
- 4- Mechanical suction device for cupping cups.
- 5- A massager.
- 6- Sterilization tools (medical cotton, medical alcohol (76%), iodine, medical gauze, medical gloves, medical coat, medical blades, medical tape, bed cover, medical bed).

Study tests

- 1- The spine flexibility test, which is a numbered box to measure flexibility, where this test is done from a long sitting position in front of the device, and the arms are extended, one above the other, the feet are separated by the width of the pelvis and are straight, and there is an assistant player who puts his hands on the knees of the test player To install them, the test is conducted so that the test player is not wearing his shoes, and he tries to extend his arms over the measuring ruler three times with stability, and in the fourth time, stability at the maximum distance in order to calculate the distance at which the arms were fixed at the last attempt (Al-Khaza'ala and Harahsheh, 2016).
- 2- A test of activities of daily living, which uses three degrees to indicate the extent of a person's ability to carry out daily activities, by giving a degree (zero): for inability, a degree (1) for medium ability, and a degree (2) for normal ability (Majli et al., 2007).
- 3- The graded pain scale test, which is a graded pain scale with eleven degrees to measure the degree of pain, where a degree (zero) = no pain, and a degree (10) = extreme unbearable pain (Kharrabeh, 2018)

Study application procedures

- 1-A written consent form was designed to participate in this study.
- 2-A special form was designed to collect personal and study data for each player
- 3- The data of the sample members was documented by making a file for each individual, and personal data (height, weight, and age) were collected.
- 4- The performance of each test and the method of wet cupping were explained.
- 5- An exploratory study was conducted on a group of (12) players who meet the conditions of the study sample and the same conditions of the study procedures for a period of two weeks between the pre and post test, with the aim of identifying the problems that may hinder conducting the experiment, and identifying the suitability of the study sample to avoid errors during Application, and the researcher got acquainted with the details of the study procedures in terms of how to apply measurements and tests, determine the places for wet cupping, and choose the appropriate tools and sizes of cups.
- 6- The pre tests were applied for each of the sample members, which numbered (20) novice players, related to the study variables (flexibility, activities of daily living, and the degree of pain)
- 7- After applying the pre tests for the study, a wet cupping session was conducted for each member of the sample.

The wet cupping process was carried out as follows:

- a) The rookie player was lying on his stomach on a medical bed with a special blanket on it.
- B - Wiping the back area and sterilizing it with medical alcohol (76%).

C - Doing a massage with a special device for a period of (10) minutes in order to stimulate blood circulation.

d- Sterilize the back area again with medical alcohol (76%).

C- Placing (6) large sizes of single-use plastic cups for cupping, on the points that the researcher was familiar with, namely (two cups next to the S1 vertebra, two cups next to the L1 vertebra, and two cups next to the T7 vertebra) shown in Appendix No. (1) The cups were suctioned with a mechanical suction device and kept for a minute.

h- Remove the cups from the points on which they were placed and then prick their place with a sterile surgical blade.

g- Return the cups again and suction with the mechanical suction device to remove the cupping blood.

D- Removing the cups after the blood has stopped, and then performing a sterilization with medical iodine.

i- Putting an operations tape in place of the cups to prevent germs and microbes.

8- The sample members were asked not to engage in any physical activity for (48) hours after the wet cupping procedure.

9- The coach was asked not to give the players any exercises related to the flexibility of the spine, as well as to ask the players not to practice any exercises related to the flexibility of the spine, for a period of (a month) from the start of the experiment.

10- A month after the first session of wet cupping, a second session was held for the sample members in the same way and the same points that were applied in the first session and at the same time of the day.

11- After (3) days of the second session of wet cupping, the post tests for each player related to the variables of the study were applied, in the same way and conditions that were applied in the pre tests.

12- It was taken into account not to extract more than one unit of blood in the first and second sessions together for wet cupping.

Scientific transactions for exams

Tests validity

Validity was found by reviewing several previous studies (2008). Farhadi, et al. Kim, et al. (2011) (2012) Lauche, et al. Al-Kharrabeh (2018), which used these tests.

Tests reliability

The reliability was confirmed by the method of test and re-test

The tests were applied to a group of (12) players who meet the conditions of the study sample, and with the same conditions as the study procedures, for a period of one week between the test and its repetition (Table 2).

The results of Table 2 indicate that there is a high correlation coefficient between application and re-application, which is an indication of the reliability of the research tests.

Results and discussion

The hypothesis of the study states that " There are statistically significant differences at the level ($\alpha \leq 0.05$) between the two measurements, pre and post, in the effect of wet cupping on Flexibility, Daily Activity Living and Pain among Karate Players In Jordan.

To verify this hypothesis, the pairs t-test was used to compare between the pre-test and the post-measurement of the study variables, and (Table 3) illustrates this The results of Table No. (3) indicate that there are statistically significant

Table 2. Averages, standard deviations, and the value of the and Spearman correlation coefficient between test and re-test on a sample of (12) player.

Variables		mean	Standard deviation	Pearson	Spearman
Daily activity living (score)	test	.6667	.70711	0.912*	0.951*
	retest	.7778	.83333		
Pain (score)	test	5.5556	2.29734	0.989*	*0.987
	retest	5.6667	2.29129		
Flexibility(cm)	test	35.1111	7.00793	0.990*	0.996*
	retest	35.6667	6.74537		

* Statistically significant at the level ($\alpha \leq 0.05$)

Table 3. Mean, standard deviation and (t) value between the two measurements before and after the experimental group.

Variables		mean	Standard deviation	T value	sig
Daily activity living (score)	pre	.85	.587	-5.101	*.000
	post	1.70	.571		
Pain (score)	pre	4.40	2.303	4.000	*.001
	post	2.80	1.361		
Flexibility(cm)	pre	36.75	6.348	-9.658	.000 *
	post	38.55	6.386		

differences at the level ($\alpha \leq 0.05$) between the pre- and post-measurement in favor of the post-measurement in the study variables. Which indicates the positive effect of using wet cupping on these variables

The results of the study will be interpreted as follows:

Degree of pain

This result can be attributed to the fact that wet cupping, which was performed on the study sample, contributed to reducing the degree of pain. It is considered one of the causes of pain and muscle pain, which helps in accelerating the recovery process and relieving muscle pain resulting from training fatigue, and facilitating the flow of blood in the body.

Al-Kaabi (2017), through the athletes who applied cupping in the Rio Olympics (2016), indicated that it is an effective method in accelerating the recovery process from training and competition fatigue, treating many diseases, facilitating blood flow in the body, relieving muscle pain resulting from training and competition, and working on Activating the vital functions of the various organs and organs of the body, and this is what the athlete and coach need to achieve.

The decrease in the degree of pain may be caused by stimulating the pain ends at the points where wet cupping was done, as with the cupping process and the occurrence of the reverse pressure, the fluids will rush mainly towards the suction place, which may cause great pressure on the pain ends, where (2004) Hayashi indicated that the effect on the endings of pain directly affects the hypothalamus region of the brain (the hypothalamus), which responds quickly, by secreting anti-pain hormones such as endorphins and enkephalin, which are secreted by the brain and pituitary gland, where there are more than twenty types. Differently, this is in addition to increasing the secretion of nitric acid, which transports these hormones, and endorphins and enkephalin suppress nerve impulses related to pain, greatly inhibiting their speed

Lee, Kim and Ernst (2011) indicate that cupping is very effective in cases of pain due to the secretion of endorphins and the removal of prostaglandins related to inflammation and pain sensation in tissues.

This finding is in agreement with AlBedah, et al. (2015) and Kim, et al. (2011), who concluded that the use of wet cupping affects a statistically significant effect on reducing the degree of pain in the study sample.

Flexibility

The improvement in the flexibility of the spine can be explained by the decrease in the degree of pain, as there is a close relationship between them. The decrease in the degree of pain facilitates movement and reduces the severity of its difficulty, which works to stimulate blood circulation to the muscles and thus their temperature may rise, which helps the working muscles to The sides of the spine restore their anatomical length, and thus may lead to an improvement in muscle flexibility, allowing the joints to move at a greater angle and improve their flexibility, as Magali et al. (2007) see that the degree of pain is one of the most important determinants of freedom of movement and muscle flexibility, and that the flexibility of the spine is related to the degree of muscle heat.

Saleh (2007) mentioned that wet cupping is one of the most widely used types of cupping in the sports field, which restores vitality and helps maintain strength and flexibility.

The researchers believe that suctioning blood mixtures suspended in the smallest capillaries in the confined area, such as aging red blood cells, and other harmful substances that accumulate and stagnate in certain areas of the body, including the upper back area, where these areas are characterized by weak blood flow and its slow flow being a non-moving area. Therefore, the large accumulation of these wastes may cause an imbalance in the blood circulation, which is reflected in the functional performance of the body and causes various muscular contractions that affect the flexibility of the muscles and thus the flexibility of the spine. Suctioning these mixtures may stimulate blood circulation and improve muscle flexibility and thus improvement in Flexibility of the spine.

Al-Kaabi (2017) mentioned that wet cupping works to rid the body of aging red blood cells, which works to renew the blood and improve its quality, and its cells become active and vital and able to carry out their functions effectively, as these cells play a very active role in sports activity, and Cupping makes the blood pure and performs its functions more efficiently, feeding the muscle cells, nerves and other functional organs of the body with the nutrients and oxygen they need, and ridding it of carbon dioxide and other wastes such as lactic acid.

This result agreed with (Farhadi, et al, 2008), (Al Jaouni, et al, 2017), where they found that the use of cupping affects a statistically significant effect on the level of disability, quality of life, quality of life, and shows the correlation of improvement in the level of motor disability. With the improvement of the degree of movement flexibility and the improvement of the level of quality and quality of life, where Magali et al. (2007) see that the degree of pain and the degree of disability are among the most important determinants of freedom of movement and muscle flexibility.

Activities of daily living

The researchers also attribute the improvement in activities of daily living to the decrease and improvement in the degree of pain as well as the improvement in the degree of flexibility, which stimulates the blood circulation of the muscles and raises their temperature, thus improving the ability to carry out daily activities, which allows ease of movement and the practice of their daily activities efficiently and actively.

Where Magali et al. (2007) indicated that the flexibility of the spine and the ability to carry out daily activities is related to the temperature of the muscles, and it is believed here that cupping raises the body temperature.

This result agreed with Al-Kharrabeh study (2018), which showed that there are statistically significant differences in improving the ability to do daily work, pain degree and flexibility of the spine.

Conclusions

1. Wet cupping has a positive effect on reducing the degree of pain resulting from training for karate players.
2. Wet cupping has a positive effect on the level of flexibility and the degree of doing daily chores for karate players.

Recommendations

1. Generalizing the use of wet cupping to sports centers to apply it to players who suffer from pain resulting from training, because of its positive effect in relieving the degree of pain, improving flexibility and increasing the ability to perform daily activities efficiently and actively.
2. Conducting follow-up studies on the same category to identify the extent to which the positive impact of wet cupping continues.
3. Conducting studies of the effect of cupping on the variables of the current study that use laboratory measurements to analyze blood and body components to give more accurate results.

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