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Occupational therapy and motor rehabilitation and their relationship to the prevention of sports injuries among handball league players in the southern region

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Abstract

Athletes are exposed to injury when the scientific and technical conditions are not observed in training or during competitions, as a result of the high and continuous effort on the body's organs and its various functional organs. Most sports injuries occur as a result of the exposure of a part or group of parts of the body to a force that exceeds its natural physiological endurance. Which called on those in charge of the treatment and rehabilitation aspects of sports injuries to use the latest means and various methods to expedite the process of sports treatment and rehabilitation to ensure the speedy return of injured players to the stadiums and in the required manner, as the rehabilitation process is responsible for helping the injured player to recover what he may lose in terms of movement and skill ability as a result of injury. The importance of the research is to know how much the coaches of the clubs in the southern region have in the first hand ball of information from the therapeutic culture to prevent sports injuries and motor rehabilitation to contribute to the non-occurrence of the injury before it occurs, so the coach is very aware of how to treat and rehabilitate it, and thus the player returns to the stadiums faster. The objectives of the research are to identify the therapeutic culture for the prevention of sports injuries and motor rehabilitation for coaches of clubs in the southern region of handball, and to identify the level of therapeutic culture for the prevention of sports injuries and motor rehabilitation for coaches. As for the second chapter, the researcher touched on the research methodology using the descriptive approach in the survey and correlation studies method. As for the research community and its sample, it was identified and they are players of clubs in the southern region in handball, which is represented by clubs in the southern region in handball, whose number is (260) players. The most important conclusions were that the use of this scale is to identify the level of therapeutic culture for sports injuries and motor rehabilitation for handball players in the southern region. As for the most important recommendations, the researcher concluded that it is necessary to pay attention to the therapeutic cultural aspect and motor rehabilitation to prevent sports injuries.

Keywords: Occupational therapy, motor rehabilitation

1. Introduction

The great interest that nations and peoples attach to the issue of human health and the setting of special standards for the human body, since the health level of society is one of the measures of the civilizational progress of every nation. The most prominent science that was researched in this field is the science of therapeutic sports through its various therapeutic methods for treating injuries and rehabilitating the movement, as the era in which we live is an era of rapid and evolving psychological change, and the therapeutic culture is an "important" part of this development. As the therapeutic culture for the prevention of sports injuries is a manifestation of society as well as it is part of the general culture in general, and interest in it is considered one of the indicators of a high level of health and progress in society, as it has a clear impact on the health, therapeutic, social, educational and cultural aspect of human. Sport has taken a good and high position in developed countries, but the nature of sports is not free from the occurrence of sports injuries, which is one of the most serious obstacles facing players, which may cause them to be removed from the stadiums while they are at the peak of their athletic giving, which leads to their early retirement and their distance from sports competitions.

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Lead to a decrease in their physical, skill or even psychological level relative to the level of other players who are not injured, As "injury" is one of the basic problems facing the process of advancing sports levels and moving from one level to another, and athletes are exposed to injury when scientific and technical conditions are not taken into account in training or during competitions, due to the high and continuous effort on the body's organs and its various functional devices. Most sports injuries occur as a result of the exposure of a part or a group of body parts to a force that exceeds its natural physiological endurance. (Al-Nahar, Hazem & ather, 2010, p. 106) ^[1].

Which called on those in charge of the treatment and rehabilitation aspects of sports injuries to use the latest means and various methods to expedite the process of sports treatment and rehabilitation to ensure the speedy return of injured players to the stadiums and in the required manner, as the rehabilitation process "is responsible for helping the injured player to recover what he may lose in terms of movement and skill ability as a result injury". (Ramadan, Abdel Fattah Al-Tabbaa, 2000, p. 133) ^[2].

The importance of the research is to know how much the coaches of the clubs in the southern region have in the first handball of information from the functional therapeutic culture for the prevention of sports injuries and motor rehabilitation to contribute to the non-occurrence of the injury before it occurs, so the coach is very aware of how to treat and rehabilitate it, and thus the player returns to the stadiums faster, and this is done through the use of the scientific and objective method represented in building a scale of therapeutic culture for the prevention of sports injuries and motor rehabilitation for the coaches of clubs in the southern region to help players evaluate what they possess of the therapeutic culture for the prevention of sports injuries and motor rehabilitation in the game of handball. (Radhi Abdul Hussein, A., Kadhim Hrebid, N., & Jabber Mohamed, J. 2022) ^[18].

1.1 Research Problem

Through the fact that the researcher is a practitioner of training work with several sports clubs as well as university teams in handball for more than six years, as well as their participation in several developmental courses to prevent sports injuries and methods of treatment, It was found that a large number of coaches have only a small amount of functional therapeutic culture for the prevention of sports injuries and motor rehabilitation, as well as the absence of a sports therapist specialized in sports injuries, and also the lack of information they have regarding the therapeutic culture when their players are exposed to sports injuries, how to deal with them, prevent them, and rehabilitate them. In the absence of a measure of curative culture for the prevention of sports injuries and motor rehabilitation according to the knowledge of the researcher, therefore, the researcher decided to study this problem and stand on the possibility of contributing to its solution by following the scientific and objective bases represented by building a scale of curative culture for the prevention of sports injuries and motor rehabilitation for coaches of clubs in the region Are there differences in the level of therapeutic culture for the prevention of sports injuries and motor rehabilitation for handball coaches in the southern region?

1.2 Research objective

- To identify the level of occupational therapy culture for the prevention of sports injuries for the players of the

southern region clubs in handball.

- Identify the level of therapeutic culture for the prevention of sports injuries and motor rehabilitation for the players of the southern region clubs in handball.

1.3 Research hypotheses

There are statistically significant differences in the level of functional therapeutic culture for the prevention of sports injuries and motor rehabilitation between the players of the excellent and first-class clubs in the southern region of handball.

1.4 Research fields

1.4.1 The human field: Players of clubs in the southern region in handball for the Premier and First Divisions for the 2022-2023 sports season.

1.4.2 Time field: From 2/11/2022 to 8/2/2023.

1.4.3 Spatial field: Closed sports halls, open arenas, and club headquarters in the southern region of handball.

1.5 Definition of Terms

Culture: is the total fabric of ideas, beliefs, customs, traditions and trends in a society. (Al-Fatlawi, Jauthar, 2005) ^[3].

Therapeutic culture: It is the study of practices within traditional societies that must be studied within the framework of culture. (Eliot, Thomas, 2003, p. 171) ^[4].

2. Research methodology and field procedures

2.1 Research Methodology

The researcher used the descriptive approach using the survey method and normative studies due to its suitability to the nature of the current problem.

2.2 Research community

The current research community consists of (260) players in the Premier League and first-class handball clubs in the southern region for the sports season 2022-2023. The research community includes (18) clubs in the southern region registered in the lists of the Iraqi Central Handball Federation.

2.3 Research sample

The researcher chose the research sample by relying on the scientific references that see "that the studies that aim to determine standard grades and levels such as batteries and scales, the number of the sample is five times the number of tests used in the battery or the paragraphs in the scale" (Al-Saadawi, Mohsen Ali & others, 2007, p. 24) ^[5], on the basis of that, the current research sample included (155) players for the construction sample and (105) players for the rationing sample from Premier League clubs and first-class clubs in the southern region in handball, as that sample was drawn according to the random stratified method. Table No. (1) represents the research community and its sample.

Table 1: Shows the research community and its samples.

Details of the research community and its samples	Numbers of players			Percentage
	First	Excellent	Total	
Construction sample	95	60	155	100%
Final application sample	75	30	105	100%
Total	170	90		100%

2.4 Means of collecting information, data, devices and tools used in the research

In order to solve the research problem and achieve its objectives, the researcher used the following tools and devices:

2.4.1 Research Methods

1. The Questionnaire.
2. Scientific sources and references.
3. Personal interviews.
4. Standards and tests.
5. International Information Network (Internet).
6. Statistical technical programs (SPSS bag).
7. Similar studies and research.

2.4.2 The devices used in the research

1. Data collection and dump forms.
2. Electronic Calculator (Pantium-4)
3. Manual calculator.
4. Pens and pencils.
5. The Assistant Work Team.

2.5 Field research procedures

2.5.1 Scale building steps

To achieve the first objective of the research, which is to build a measure of functional culture for the prevention of sports injuries and motor rehabilitation, the researcher followed the following steps (Allawi, Muhammad Hassan & Al-Din Radwan, Muhammad Nasr, 2000, p. 319) ^[6].

2.5.2 The purpose of building the scale

"The early need to determine the purpose of the test when deciding to build it stems from the hypothesis that the form of the test and some of its characteristics differ according to the purpose of that test" (Abdul-Jabbar, Qais Naji & Ahmed, Bastawisi, 1984, p. 157) ^[7, 16]. Accordingly, the purpose of the current research is to build a measure of therapeutic culture for the prevention of sports injuries and motor rehabilitation for handball players in the southern region.

2.5.3 Determine the phenomenon to be measured

The phenomenon that the research aims to measure is to determine the level of therapeutic culture for the prevention of sports injuries and motor rehabilitation for handball players in the southern region.

2.5.4 Determining areas of functional culture

To determine the areas of functional culture, the researcher looked at a group of studies and research and many sources in the psychological and educational sciences, sports and health culture, where it was possible to collect an area from the fields of therapeutic culture, and these fields must be accurate to the extent that it is difficult to analyze them into what is simpler than them and form a phenomenon in its totality. It is required to measure it to a large extent, and here the researcher must give a definition for each area of the therapeutic culture for the prevention of sports injuries, which in turn represent the areas of the therapeutic culture scale.

2.5.5 Formulation and collection of scale paragraphs

After reviewing the previous literature from the references of sports medicine, sports injuries and rehabilitation, it was possible to formulate a set of paragraphs in addition to paragraphs added by the researchers. The set of paragraphs of the scale in its initial form reached (39) paragraphs of the

scale.

2.5.6 Determine the method of measurement (answer the paragraphs)

In the measurement method, the researcher used the developed Lekart method, which is similar to the multiple choice method, as he presents the respondent with paragraphs and asks him to specify his answer by choosing an alternative from several alternatives with different weights. As it is one of the scientific methods used in building scales, so the answer alternatives were formulated according to this method, as the respondent is asked to record his agreement and disagreement with each paragraph by choosing an alternative from the answer alternatives in front of each paragraph, accordingly, the researcher suggested the following alternatives (strongly agree, agree, neutral, disagree, strongly disagree) and grades were given (1, 2, 3, 4, 5), respectively.

2.6 Scientific foundations for the measure of therapeutic culture for the prevention of sports injuries and motor rehabilitation in handball

2.6.1 The apparent validity of the scale

The best way to ensure the apparent veracity of the paragraphs is for a number of experts and specialists to evaluate their validity to measure the quality for which they were developed (Eble, R.L., 1972. P. 555) ^[8]. After formulating the paragraphs of the therapeutic culture scale for the prevention of sports injuries and motor rehabilitation for handball players, which numbered (39) paragraphs, the researcher presented them to (14) experts and arbitrators who are specialists in sports psychology, testing and measurement, rehabilitation of sports injuries and training physiology. They study each paragraph of the scale and give their opinions on its validity in measuring the therapeutic culture for the prevention of sports injuries and motor rehabilitation. Mark (/) under the field of a word that is valid if the paragraph is valid, and a mark (X) under the field that is not valid if the paragraph is not valid, and mention any modification that the expert deems necessary for the paragraphs under the field that are valid after modification. As for the alternatives, the researcher proposed (five) alternatives, and to judge the validity of the paragraphs from the point of view of experts and specialists to choose what he deems appropriate from them, the researcher used the Chi-square as well as the percentage, and after collecting the opinions of experts and arbitrators, the researcher took the paragraph that proved its validity through the calculated Chi-square degree, which must be greater than the tabular ones at the degree of freedom (1) and the level of significance (0.05), which amounted to a value, as well as adopting a percentage of (75%) or more as a valid paragraph, if Bloom indicates that "it is possible to rely on the approval of experts' opinions at a rate of (75%) or more in this type of truth (1), and thus the number of paragraphs became (39) paragraphs. And not excluding any paragraph by paragraphs, because the percentage of experts' agreement on it was (75%), in addition to the researcher's commitment to the linguistic amendments proposed by the experts who expressed their approval of all the instructions, components, and five alternatives to it.

2.6.2 Exploratory experience of the scale

The best way to explore the suitability of the important research tool is to test it before implementing it, as the exploratory experiment is "a mini-experiment similar to the basic experiment, as it is not permissible to conduct the

exploratory experiment on the sample members themselves because they will be affected by the training in the exploratory experiment, which affects the result of the test or measurement (Mahjoub, Wajih, 2002, pg. 163) ^[9]. The exploratory experiment was conducted on a sample of (24) players from the governorates of Maysan and Basra, with (12) players from the Sugar Club players for the first degree and (12) players from the Basra Municipality Club for the excellent degree, other than the research sample, as they were chosen from the research community.

2.6.3 The validity of the construction of the scale

After finding apparent validity, as it was mentioned, then finding (formative validity), and this procedure is called conceptual and formative validity, and it means “the extent to which the test measures the formation of a hypothesis or a specific feature.” Then it revealed the sincerity of the singular construction (the discriminatory power of the paragraphs) and the consistency coefficient internal scale, and these methods are statistical indicators of the validity of the construction (Al-Absi, Muhammad Mustafa, 2010, pg. 206) ^[10]. Below is a

description of the statistical analysis methods used to verify the validity of the construction of the measure of therapeutic culture for the prevention of sports injuries and motor rehabilitation for handball players for the first and excellent degrees in the southern region.

2.7 Internal Consistency

The coefficient of internal consistency refers to the extent of the homogeneity of the paragraphs in their measurement of the adjective, as the total sum of the scale is considered as instantaneous spoken measurements through its association with the scores of the players on the paragraphs, and therefore the correlation of the paragraph with the total score of the scale means that the paragraph measures the same concept that the total score measures (Ibrahim, Marwan Abdel Majeed, 2002, pp. 147) ^[11]. After excluding the non-distinguishing items from the scale, the researchers relied on calculating the validity of the paragraph on the simple correlation coefficient (Pearson) that shows the scores of each paragraph and the total score of the scale, and Table (2) shows that.

Table 2: Shows the correlation coefficient between the degree of each item with the total of the building sample for the measure of therapeutic culture for the prevention of sports injuries and motor rehabilitation at the level of significance (0.01).

Paragraph number	Correlation coefficient	Paragraph number	Correlation coefficient	Paragraph number	Correlation coefficient
1	0.685	14	0.722	27	0.684
2	0.645	15	0.685	28	0.682
3	0.675	16	0.694	29	0.665
4	0.697	17	0.711	30	0.732
5	0.731	18	0.723	31	0.683
6	0.663	19	0.689	32	0.685
7	0.712	20	0.723	33	0.689
8	0.687	21	0.718	34	0.725
9	0.654	22	0.654	35	0.693
10	0.673	23	0.682	36	0.674
11	0.653	24	0.696	37	0.679
12	0.692	25	0.658	38	0.721
13	0.681	26	0.741	30	0.685

From Table (2) it is clear that the matrix of all correlation coefficients of the scale items is saturated with the total score of the scale at the level of significance (0.01), which indicates the validity of the study tool.

2.8 Reliability of the scale

The stability of the test is one of the important indicators of the consistency of the scale items in measuring what it is supposed to measure with an acceptable degree of accuracy (Al-Mandalawi, Qasim & others, 1989, p. 65) ^[12]. Also, the reliability of the test means “the accuracy of the scale in observation, its non-contradictoriness with itself, its consistency and consistency in what it provides us with information on the behavior of the individual (Hassan, Fathi & Salman, Ahmed, 1988, p. 53) ^[13], and there are several methods for calculating the reliability of the test, and among these methods are:

2.8.1 Description of the scale in its final form

After the researcher completed the necessary scientific transactions for the measure of functional culture for the prevention of sports injuries and motor rehabilitation through the previous procedures, the scale became ready with its paragraphs amounting to (36 items), and it was specified in front of each paragraph (strongly agree, agree, neutral, disagree, strongly disagree) and carry weights (1, 2, 3, 4, 5)

respectively for the expressions.

The final application of the functional culture scale for the prevention of sports injuries and motor rehabilitation (the main experiment):

The functional culture scale for the prevention of sports injuries and motor rehabilitation was applied to the application sample of (260) players, with (90) players from Premier League clubs and (170) players from First Class clubs, with the help of the assistant work team, the application sample constituted (100%) of the total research community.

2.9 Statistical Methods

To achieve the purposes of the current research, the researcher used statistical methods, which were calculated using the Statistical Portfolio Program (SPSS).

3. Presentation, analysis and discussion of results.

3.1 Presenting the results of building a measure of functional and rehabilitative culture for handball players in the southern region for the first and excellent levels

This goal was achieved by building the scale, which met the necessary conditions for this type, as explained in detail in the second chapter of this research, and this scale is one of the important and complementary tools to achieve the other research goals.

3.2 Presenting the results of presenting the results of building a scale of functional and rehabilitative culture for handball players in the southern region for the first and excellent degrees, analyzing and discussing them

Table 3: It shows the results of the (T) test for the difference between the arithmetic mean and the hypothetical average of the level of therapeutic and rehabilitative culture for first-class players:

Sample	Mean	Std. Deviation	Hypothetical Mean	T value Calculated	Sig level	Sig Type
170	104.32	20.22	108	1.82	0.78	Non sig

Through the table above and for the purpose of identifying the therapeutic culture and applying the scale in its final form to the application sample of first-class players, which numbered (170) players, And analyzing the responses of the players in the light of the answer alternatives, it was found that the arithmetic mean is (104.32) with a standard deviation of (20.22) degrees, and when compared to the hypothetical mean of (108) degrees using the (T) test for one sample, it turns out that the calculated value (1.82) is not significant. at the level of significance (0.05) and with a degree of freedom (168). This means that there is no statistically significant difference between the two averages, and this result indicates that the players have knowledge in terms of treatment and rehabilitation, but it did not rise to the level of morale.

3.3 Presenting and analyzing the results of the therapeutic and rehabilitative culture measure for the (excellent) handball players in the southern region

Table 4: It shows the results of the (T) test for the difference between the arithmetic mean and the hypothetical average of the level of therapeutic and rehabilitative knowledge of the premium class players

Sample	Mean	Std. Deviation	Hypothetical Mean	T value Calculated	Sig level	Sig type
90	117.15	23.13	108	9.11	0.000	Sig

Table (4) shows the statistical values of the sample of premium class players in the therapeutic and rehabilitative culture scale. After applying the scale in its final form to the application sample of premium class players, whose number is (90) players, and analyzing the responses of the players in light of the answer alternatives, it turns out that the arithmetic mean is equal to (117.15) with a standard deviation of (23.13) degrees, and when compared with the hypothetical average of (108) degrees using the (t) test for one sample, it turns out that the calculated (t) value is (9.11), which is significant at the level of significance (0,000) and with a degree of freedom (88), and this means that there is a statistically significant difference between the two averages and in favor of the arithmetic mean. This result indicates that the players have a high level of knowledge in terms of treatment and rehabilitation.

3.4 Presenting, analyzing and discussing the results of the comparison in the therapeutic and rehabilitative culture between handball players in the southern region for the first and excellent degrees

Table 5: It shows the statistical values, the calculated and tabular (T) value, and the level of significance for the first and excellent class players in the therapeutic and rehabilitation knowledge scale.

Class players	Mean	Std. Deviation	T value Calculated	Sig level	Sig type
First	104.32	20.22	7.84	0.000	Sig
Excellent	117.15	23.13			

Table (5) shows the results of the comparison between the

sample of first-class and excellent-class players in the scale of therapeutic and rehabilitative culture, and after applying the scale in its final form to the research sample of (260) players. After analyzing the responses of the players in the light of the alternatives to the answer, the statistical values of the first-class players were shown. It appeared to us that the arithmetic mean of (104.32) and a standard deviation of (20.22) degrees. As for the premium class players, the arithmetic mean value was (117.15), with a standard deviation of (23.13) degrees. When compared with the statistical values of two groups and using the (t) test for two independent samples, it turns out that the calculated (t) value is (7.84) at the level of significance (0,000) and with a degree of freedom (258). This means that there is a statistically significant difference between the averages and in favor of the first-class handball players, and this result indicates that the players have the necessary therapeutic culture at a very excellent rate compared to the first-class handball players.

4. Discussing the results

In the light of the results presented in tables (3) related to the results of the (T) test for the difference between the arithmetic mean and the hypothetical average of the level of therapeutic and rehabilitative knowledge of the first-class players, it appeared to us that there were no significant differences between the first-class players in the therapeutic and rehabilitative culture. The researcher attributes the reason to the lack of sufficient knowledge and therapeutic courses related to therapeutic and rehabilitative knowledge, and their dependence on therapists whose information is limited, or in some clubs their reliance on external therapy, individually or through the coach or assistant coach as an alternative to the sports doctor. The researcher agrees with the findings of (Dimen Farag Karim, 2012) about "the absence of medical personnel in sports teams, the different methods of treatment for some sports injuries, and the poor possession of information by players about the possibility of acting during an injury in training units, which negatively affects the level of the player" (Karim, Damon Farag, 2012, pg. 273) ^[14].

And in the light of the results presented in Table (4) related to the results of the (T) test for the difference between the arithmetic mean and the hypothetical average of the level of therapeutic and rehabilitative knowledge of the premium class players, it appeared to us that there were significant differences between the premium class players in the therapeutic and rehabilitative knowledge. The researcher attributes the reason to the fact that the players have the knowledge of the treatment and rehabilitation methods and their familiarity with them, and this is consistent with what Sami'a Khalil mentioned (the knowledge of the athletes about how to develop their preventive means works to avoid injury, as well as the knowledge of the correct treatment methods when injured, which reduces the duration of the player's absence from the activity practicing athlete) (Khalil, Samia, 1990, p.7) ^[15]. In addition, the game of handball is one of the games in which the success of the player depends on the theoretical and practical side, as providing the player with the required knowledge and information has a role in protecting

the player from exposure to injury, as the real success of the athlete lies in combining practice with activity and knowledge. And it is necessary for every athlete to be acquainted with the mathematical information that pertains to the game, including the therapeutic and rehabilitative aspect that he practices (Abdul-Jabbar, Qais Naji & Ahmed, Bastawisi, 1984, p. 159) ^[7, 16].

In the light of the results presented in Table (5) related to the results of the (T) test for the difference between the arithmetic mean and the hypothetical average of the level of therapeutic and rehabilitative knowledge of the first and premium class players, it appeared to us that there were significant differences between the first class players in the therapeutic and rehabilitative knowledge and in favor of the excellent class. The researcher attributes the reason to their long experiences that they spent in the field of handball more than the first-class players who did not acquire sufficient experience as their predecessors, and the provision of material and moral capabilities for the excellent class and the availability of medical teams that accompany them in the stadiums they also pay constant attention to the therapeutic and rehabilitative aspects that are provided to them by experienced and specialized people (therapists or trainers) for their acquisition of knowledge that prevents injuries from occurring, and this contributes to the speed of reaching the goal, which is (the upper levels). This is consistent with what was confirmed by (Mohamed Sobhi Hassanein and Hamdi Abdel Moneim, 1988) ^[13] "The player's access to high levels depends on developing his cognitive aspects.

As for the first-class players, we notice their lack of therapists in clubs or their dependence on an inexperienced therapist, as well as their lack of interest in the therapeutic and rehabilitative side, and the lack of courses for treatment and rehabilitation due to the weak financial support allocated to these clubs, in addition to that their lack of acquisition of therapeutic and rehabilitative knowledge, which ultimately leads to The weakness of their practice of the game The researcher agrees with (Safia Abdel Rahman and Sultan Safia Mansour, 1999) ^[17] "The economic dimension is one of the most obstacles to the practice of sports activity" (Abdel Rahman, Safia & Mansour, Sultan Safia, 1999, p. 62) ^[17].

5. Conclusions and recommendations

5.1 Conclusions

- Using the scale to identify the level of therapeutic culture for sports injuries and motor rehabilitation for handball players in the southern region.
- Through the results obtained from the scale, differences were shown in the level of therapeutic education for sports injuries and rehabilitation between the players of the excellent and first class in the southern region of handball.
- The use of this scale indicated that there are differences between the level of therapeutic culture for the Premier League players more than the first-class handball players in the southern handball region.

5.2 Recommendations

- The need to pay attention to the therapeutic cultural aspect and motor rehabilitation to prevent sports injuries.
- Encourage the trainers to pay attention to the therapeutic culture and motor rehabilitation to prevent injuries by involving them in specialized courses and workshops in this field.
- This scale has been used in other similar studies of other sports.

6. References

1. Al-Nahar Hazem, ather. Sport and health in our lives: (Amman, Dar Al-Yazuri Scientific; c2010).
2. Ramadan Abdel Fattah, Al-Tabbaa. The most important sports injuries and methods of treatment: (Al-Sham, Dar Tariq bin Ziyad; c2000).
3. Al-Fatlawi Jauthar. Summary of the subject of culture (adapted to simplify the language) - University of Bablyo; c2005.
4. Eliot Thomas. Notes on Toward Defining Culture, DB; c2005.
5. Al-Saadawi, Mohsen Ali, others. Scientific Research Tools in Physical Education Research, 1st Edition, Al-Najaf Al-Ashraf, Dar Al-Mawahib for Printing, Publishing and Distribution; c2007.
6. Allawi Muhammad Hassan, Al-Din Radwan, Muhammad Nasr. Measurement in Physical Education and Sports Psychology, Cairo, Dar Al-Fikr Al-Arabi; c2000.
7. Abdul-Jabbar, Qais Naji, Ahmed Bastawisi. Tests, measurement and principles of statistics in the mathematical field, University of Baghdad, Higher Education Press; c1984.
8. Eble RL Essential of Educational Measurement, 2nd Edition: (New York, MC- Hill,) (1); c1972.
9. Mahjoub Wajih. Scientific research and its methods: (Baghdad, Directorate of Dar Al-Kutub for Printing and Publishing; c2002).
10. Al-Absi Muhammad Mustafa. Realistic Evaluation in the Teaching Process: (Amman, Dar Al-Masirah for Publishing, Distribution and Printing; c2010).
11. Ibrahim Marwan Abdel Majeed. Methods and methodologies of scientific research in physical and sports education. 1st Edition: (Amman Dar Al-Thaqafa for Publishing and Distribution; c2002).
12. Al-Mandalawi Qasim, others. Tests and measurement in physical education, Higher Education Press, Baghdad; c1989.
13. Hassan Fathi, Salman Ahmed. Fundamentals of Scientific Research in Education and Human Sciences, Al-Manar Library for Publishing and Distribution, Amman; c1988.
14. Karim Damon Farag. An analytical study of medical rehabilitation obstacles from the point of view of team sports players, Sulaymaniyah Governorate Center: (Research published in the Journal of Physical Education Sciences, University of Babylon, Issue Two, Volume Five; c2012).
15. Khalil Samia. Therapeutic Sports, 1st Edition, College of Physical Education for Girls - University of Baghdad, Dar Al-Hikma Press; c1990.
16. Abdul-Jabbar, Qais Naji, Ahmed Bastawisi. Tests, measurement and principles of statistics in the mathematical field, University of Baghdad, Higher Education Press; c1984.
17. Abdel Rahman Safia, Mansour Sultan Safia. School sports for Arab girls are a necessity of life: (The Third International Scientific Conference (19-22), Part One, College of Physical Education for Girls, Alexandria University; c1999).
18. Radhi Abdul Hussein A, Kadhim Hrebid N, Jabber Mohamed J. Effect Of Qualitative Exercises Using The (Vertimax) Device To Developing The Explosive Ability Of Arms And Legs And The Skill of Long-Shooting For Youth In Handball. International Journal of Educational Review. 2022;4(2):195-209. Retrieved from <https://ejournal.unib.ac.id/IJER/article/view/24106>.

Appendix 1: The final Scale

N	Obstacles to the reality of occupational therapy and motor rehabilitation	Always agree	Mostly agree	Agree sometimes	Rarely agree	Never agree
1	The absence of a specialized physiotherapist in the team					
2	There are not enough physical therapy devices to treat injuries					
3	I see that the administrative body is not interested in the issue of physical therapy					
4	The team players do not have enough information about physical therapy					
5	I think there is a shortcoming in the work of the physiotherapist in the club					
6	There is no sports injury rehabilitation specialist in the club					
7	The lack of sufficient equipment to rehabilitate sports injuries					
8	I think there are financial difficulties facing the work of an injury rehabilitation specialist in clubs					
9	There is no place for physiotherapy sessions					
10	There are no courses to train the therapist on the latest physiotherapy devices					
11	Being injured made me avoid future injuries					
12	There are no modern means to rehabilitate the injury when it happened to me					
13	Knowledge of various treatment methods helps me to rehabilitate my injury					