



DETERMINING THE DIFFERENCES IN SUBJECTIVE INTELLIGENCE AND CROSS-CULTURAL INTELLIGENCE FOR BASKETBALL, HANDBALL, AND FOOTBALL PLAYERS

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Abstract

The first chapter of the research contains the introduction and the importance of the research. The importance of intelligence of all kinds for group games and for the players of the Middle Euphrates universities' indoor football teams has been pointed out. The aim of the study is to identify the differences between basketball, handball and football players in physical intelligence and Cross-cultural intelligence, while the third chapter contained field procedures for the research, and the population and sample of the research, as it was represented by the players of Al-Qadisiyah Governorate in basketball, handball, and football, numbering (60) players for the season 2022-2023. The research methods and tools were also explained, which were the intelligence test. In the HRB system, which contains tests of fluid intelligence and cross-cultural intelligence, the fourth chapter contained a presentation and discussion of the research results, and after taking samples and processing them statistically, the researcher concluded the following:

-1Basketball players have the highest level of fluid and cross-cultural intelligence, followed by handball players and then football players.

The researchers recommended the need to develop the level of fluid intelligence and cross-cultural intelligence of players.

Key Words :

Silent intelligence - cross-cultural intelligence - basketball - handball - football

Introduction:

The psychological aspect occupies a major role in enhancing the chances of winning in sports competitions on the basis that it is one of the basic factors in the process of modern sports training and competition. Sports psychology has gained great importance in studying the psychological aspects of players in order to reach all the basic elements that will advance the players. To the highest levels, which brings them to the highest level of performance and achievements, and accordingly, scientists in this field began to direct their interest in concepts that can be concerned with sports psychology, including the concept of intelligence of all kinds, which is an important and major factor in developing the performance of athletes in general and team sports athletes in particular. It constitutes a real motivation to achieve achievements through performing movement and tactical sentences in a smooth and easy manner and striving to achieve gains with diligence and dedication



Research Aims:

1. Identifying both the fluid intelligence and cross-cultural intelligence of basketball players.
2. Identifying both fluid intelligence and cross-cultural intelligence for handball players.
3. Identify both the fluid intelligence and the cross-cultural intelligence of football players

3-Field research procedures:

Research methodology :

The process of selecting the sample is closely linked to the nature of the research and the research community from which the sample is taken, being (the sample): “that part of the community that is selected according to scientific rules and principles so that it represents the community correctly” (1: 64). The nature of the problem is what determines the method used, so the researcher’s choice of the research method used is one of the important steps that results in the success of the research. This is why the problem imposed on the researcher the use of the descriptive method in the survey method, as “the survey is one of the basic methods in descriptive research” (2 : 20 3).

Research population and sample :

“The objectives that the researcher sets for his research and the procedures he uses determine the nature of the sample that he will choose” (3: p. 40), so the research community was represented by players from the Al-Qadisiyah Governorate clubs for the basketball, handball, and soccer Premier League, who numbered (63), representing (20). Basketball clubs, (20) handball clubs, and (23) football clubs, were chosen intentionally. As for the research sample, they were chosen randomly. (20) players were chosen in each event. Thus, the number of the sample is (60) players, constituting what 52.63% of the research community

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Tests used in the research:

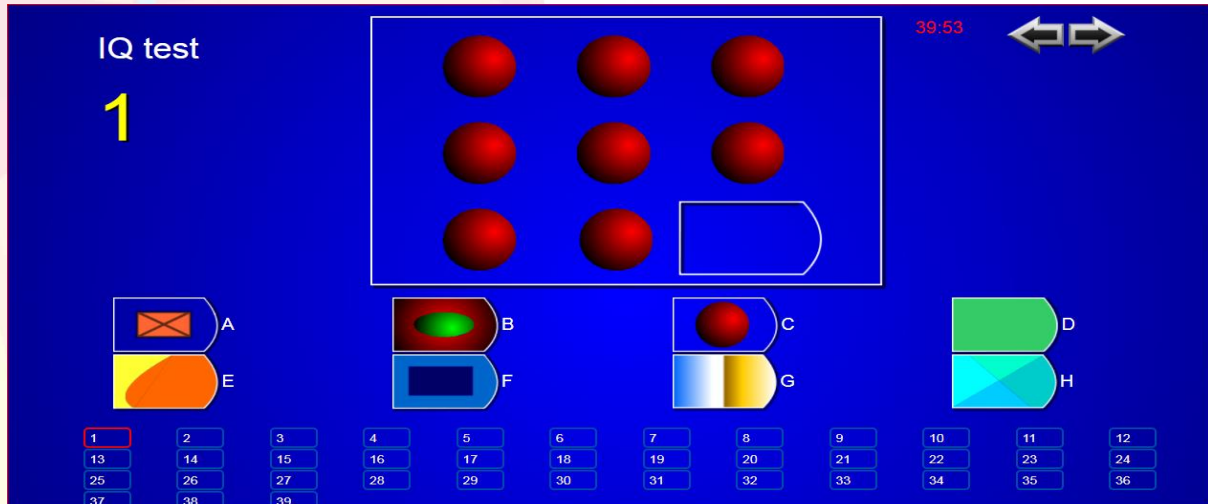
the researcher used the cognitive (HRB) system in intelligence tests, as it is one of the modern systems that is codified and accurate in giving results. Below is a presentation of these tests.

Intelligence(3:39) :

In this battery, the fluid intelligence test consists of two types:

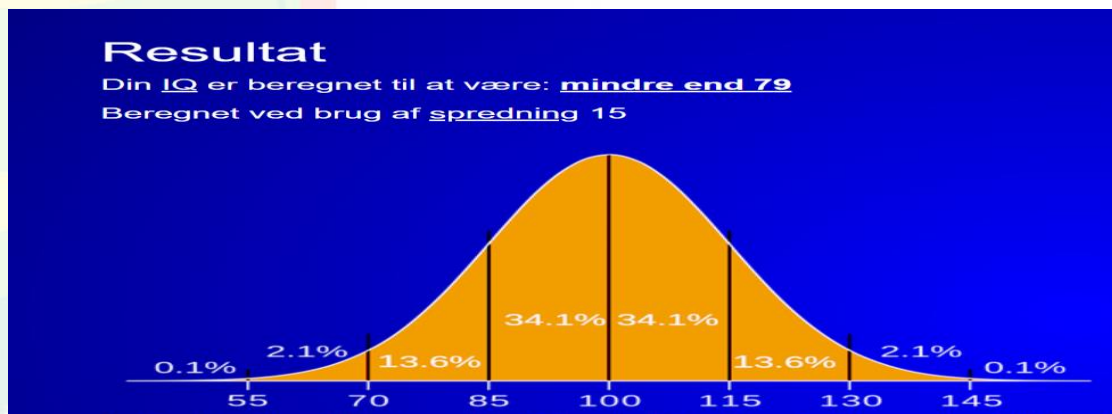
Cross-cultural: culture fair

This type of test does not require experience in a specific language or an introduction to a cultural background and is similar to the Raven matrix tests. It contains (39) colored items that range from easy to difficult and are answered within (40) minutes. In this test, you must click on the most logical alternative. Figure (1).



Figure(1)
A model of a cross-cultural intelligence test

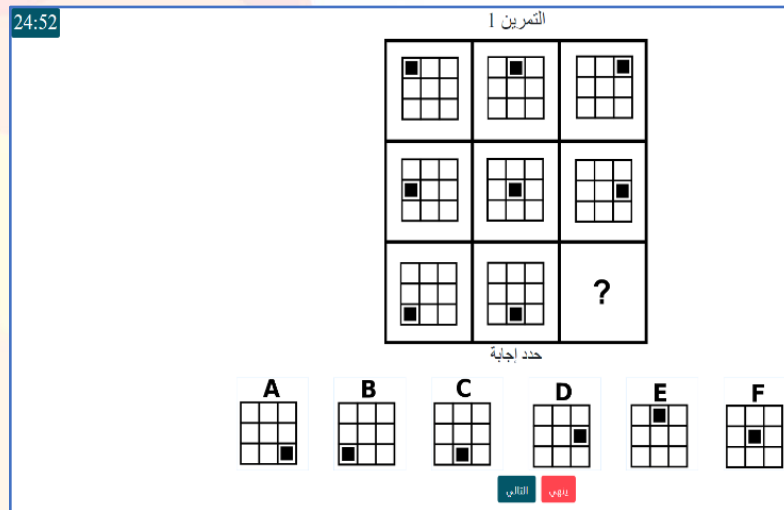
After completing the first part of the IQ test, the test passing score appears to us, which is entered after completing the second part of the test to complete the rest of the steps. The result is represented by a graphic curve sandwiched between two values: on the right, a higher value (145), which represents the gifted and highly intelligent area, and on the left, a value. The minimum is (55), which represents the abnormal. As for the area confined between these two values, which is located between (70) and (85), those who can be developed and trained in certain periods of time according to their capabilities in learning. As for the values after (85) to (115), they represent the area of the normal.



Figure(2)
Results of the cross-cultural intelligence test

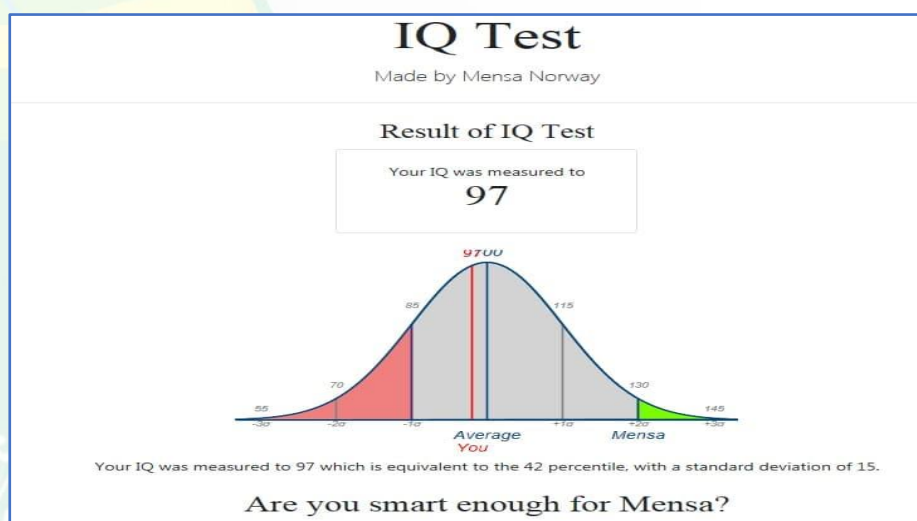
On a large scale: full-scale

In this test, it requires specifying the laboratory age and contains 36 uncolored items that take 25 minutes and range from easy to difficult. It requires a balance of time with the answers so that you can move on to the rest of the tests, Figure(3)



Figure(3)
A model of a widely used intelligence test

It also shows us the location of the tester in the global equivalence distribution. This chart differs from the previous one in the first test in that it shows the proportions of the equivalence distribution in a colored form and the location of the tester in the area of normal people or normal people so that we can know the period of training that is set for them so that they move to a better level and at the end The test items represent the second value of the first test so that we can then complete the rest of the tests, Figure(4)



Figure(4)



IQ test results are widely used

4-3 The main experiment: The researcher conducted the main experiment on the research sample, according to the following sequence

The researcher conducted tests on basketball players for the period from 11/18/2023 to 11/24/2023 at four o'clock in the afternoon, as the tests are held for each club at its headquarters.

The researcher conducted tests on handball players for the period from 12/2/2023 until 12/8/2023 at four o'clock in the afternoon, as the tests are held for each club at its headquarters.

The researcher conducted tests on football players for the period from 12/16/2023 until 12/22/2023 at four o'clock in the afternoon, as the tests are held for each club at its headquarters.

4- Presentation, analysis and discussion of results:

After completing the tests on the research sample and collecting data, the researcher presents the research results in the form of a table that can be read, and then the process of analysis and discussion of the research results is completed.

Presentation and discussion of the results:

Table No(1) .
Chi-square value for the social interaction scale items

| highest value | less value | Standard error | deviation | the middle | Variables | |
|---------------|------------|----------------|-----------|------------|-----------------------------|------------|
| | | | | | Intelligence | Events |
| 116 | 93 | 1.755 | 7.846 | 105.75 | Fluent intelligence | basketball |
| 99 | 89 | 0.616 | 2.755 | 94.3 | Cross-cultural intelligence | |
| 107 | 90 | 1.15 | 5.14 | 98.2 | Fluent intelligence | handball |
| 96 | 88 | 0.484 | 2.164 | 91.55 | Cross-cultural intelligence | |
| 99 | 85 | 0.90 | 4.05 | 91.6 | Fluent intelligence | soccer |
| 93 | 85 | 0.539 | 2.412 | 88.85 | Cross-cultural intelligence | |

Through Table (1), it becomes clear to us that the highest value of the arithmetic mean for fluid intelligence is in basketball, and it reached (105.75), while the lowest value was (93) and the highest value was (116). In cross-cultural intelligence, basketball had the lead in the value of the arithmetic mean. It reached (94.3), when its lowest value reached (89) and highest value (99)



As for handball, the arithmetic mean values for fluid intelligence and cross-cultural intelligence were respectively (98.2) and (91.55), which is therefore less than the average values for basketball. The values for fluid intelligence ranged between (90) and (107), as for cross-cultural intelligence. Its values ranged between (88) and (96)

As for football, the arithmetic mean values for fluid intelligence and cross-cultural intelligence were respectively (91.6) and (88.85), which is therefore less than the average values for basketball and handball. The values for fluid intelligence ranged between (85) and (99). As for cross-cultural intelligence, its value ranged between (85) and (93)

Table(2)

It shows the values of the sum of squares, the mean of squares, and the f value for the intelligence

| mistake percentage | Calculated F value | Mean of squares | Degrees of freedom | Sum of squares | Source of variance |
|--------------------|--------------------|-----------------|--------------------|----------------|--------------------|
| 000 | 28.838 | 1002.617 | 2 | 2005.233 | Between groups |
| | | 34.768 | 57 | 1981.75 | Within groups |

It is clear from Table (2) that the calculated f value is (28.838), which is higher than the table value (), meaning that there are significant differences in the level of emotional intelligence between basketball, handball, and football players. To learn more about these differences, values were found. LSD and determine the significance of these differences

Table No(3) .

Shows the mean difference and the LSD value for emotional intelligence

| mistake percentage | Calculated LSD value | Media difference | Variables | |
|--------------------|----------------------|------------------|------------|------------|
| 000 | 3.816 | *7.55 | handball | basketball |
| 000 | 10.416 | *14.15 | soccer | |
| 000 | 11.284- | *7.55- | basketball | handball |
| 0.01 | 2.866 | *6.6 | soccer | |
| 000 | 17.884- | *14.15- | basketball | soccer |
| 0.01 | 10.334- | *6.6- | handball | |

Through Table (3), it becomes clear to us that the significant differences that were extracted from applying the f-law are in favor of the basketball players, who had the highest level of cross-cultural intelligence, as the mean difference between them and the handball players reached (7.55), and between them and the soccer players. Foot (14.15). As for handball players, they ranked second in the level of cross-cultural intelligence, that is, after basketball players, as the mean difference between them and basketball players reached (-7.55) and between them and football players (6.6). As for football players, they ranked third in the level of cross-cultural intelligence, as the mean difference between them and basketball players reached (-14.15) and between them and handball players (-6.6). The researchers believe that the reason for this is the speed of performance in activities that require... In addition to these types of intelligence, in basketball the performance



is very fast, reaching 9 times the speed in football, according to sources, and thus it requires high intelligence during rapid movement to face different situations during the match, in application of the definition of intelligence: "It is the ability to use a person's mental abilities for coordination." between his physical movements" (4: 231). Hence, the speed of performance of basketball players requires high speed in using mental processes to keep up with the conditions of the match with high physical fitness, and this is what was proven by (Kamal Abdel Hamid and Hassanein 1987) "The existence of a direct correlation between intelligence The four elements of physical fitness are compatibility, balance, agility, and accuracy, together and individually"

Table No(4) .

It shows the values of the sum of squares, the mean of squares, and the f-value for cross-cultural intelligence

| mistake percentage | Calculated F value | Mean of squares | Degrees of freedom | Sum of squares | Source of variance |
|--------------------|--------------------|-----------------|--------------------|----------------|--------------------|
| 000 | 24.63 | 138 | 2 | 297.033 | Between groups |
| | | 6.030 | 57 | 343.7 | Within groups |

It is clear from Table (4) that the calculated value of f is (24.63), which is higher than the table (), meaning that there are significant differences in the level of cross-cultural intelligence between basketball, handball, and football players. To learn more about these differences, it was found LSD values and determine the significance of these differences .

Table No(5) .

Shows the mean difference and the value of LSD for cross-cultural intelligence

| mistake percentage | Calculated LSD value | Media difference | Variables | |
|--------------------|----------------------|------------------|------------|------------|
| 0.01 | 1.195 | *2.75 | handball | basketball |
| 000 | 3.895 | *5.45 | soccer | |
| 0.01 | 4.305 | *2.75- | basketball | handball |
| 0.01 | 1.145 | *2.7 | soccer | |
| 000 | 4.005 | *5.45- | basketball | soccer |
| 0.01 | 4.255 | *2.7- | handball | |

Through Table (5), it becomes clear to us that the significant differences that were extracted from applying the f-law are in favor of the basketball players, who had the highest level of cross-cultural intelligence, as the mean difference between them and the handball players reached (2.75), and between them and the soccer players. Foot (5.45). As for handball players, they ranked second in the level of cross-cultural intelligence, that is, after basketball players, as the mean difference between them and basketball players reached (-2.75) and between them and football players (2.7). As for football players, they ranked third in the level of cross-cultural intelligence, as the mean difference between them and basketball players reached (-5.45) and between them and handball players (-2.7). The researchers believe that the reason for this is the speed of performance



in activities that require... In addition to these types of intelligence, performance in basketball is very fast, reaching 9 times the speed in football, according to sources. Thus, it requires high intelligence during rapid movement to face different situations during the match, as intelligence is considered “the individual’s mental ability to behave well in situations during play.” And investing the individual’s intelligence to achieve the maximum possible results ..(5:26) ”

5 -Conclusions and recommendations:

5-1 Conclusions:

1 -All players for the three events (solo, handball, and soccer) have a high level of logical and cross-cultural intelligence.

2- Basketball players have the highest level of fluid and cross-cultural intelligence, followed by handball players and then football players.

5-2 Recommendations:

1- The researchers recommend the need to develop the level of fluid intelligence and cross-cultural intelligence of players.

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