Building up Sports IQ in Handball and its Relation with Psychological Fitness

Nevin Mahmoud Badr and Lamiaa Radwan

Abstract: The two researchers aims to build intelligence sports test in handball and to develop normative levels to the test and to identify the relationship between the intelligence of sports and psychological fitness. The two researchers have used the descriptive approach to the relevance of the nature of the objectives of this research, research sample included Handball female players consists of 62 players, data collection tools in the intelligence test of knowledge in handball and the measure of psychological fitness and found the results to improve social intelligence test is related to improve psychological fitness test and to improve the dynamic intelligence test is related to improve psychological fitness and to improve the intelligence test of language is related to improve psychological fitness, the two researchers recommend applying cognitive intelligence test on Handball players with the variables of their levels and ages and the application of the test on the players to know how to handle any type of intelligence is to deliver information easily and get the desired results with minimal effort and time.

Key words: Sports IQ · Handball · Psychological fitness

INTRODUCTION

Multiple intelligences are a psychological theory of the mind which thinks that human born with only one IQ and it cannot be changed. However, human has multiple kinds of intelligence when they are discovered and identified within every individual then we can deal with him easily according to the type on intelligence he got and also remarkable with. Hence, we can develop and improve kind of multiple intelligences and solve the human problems which vary from one person to another [1].

There are various kinds of intelligence and obtaining a high IQ result is not the only way to success as there are another characteristics like technical or creative or practical superiority in addition to personal qualities like ambitious, good mood, sympathy, and good memory; all this might lead to pinnacle of success despite the low of his intelligence, this means that the person who got a high intelligence, a good quality, self discipline, and dedication of the performance will probably comes up to the pinnacle of success [2, 3]. Abdel Qader [4] has refers to the effectiveness of the programs of multiple intelligence acquisition for teachers and the programs of learning and creativity. Also, Khataybeh and Adnan [5] assure the superiority of using the multiple intelligence strategy over the traditional way of teaching students educational process in the basics education fields. Psychological fitness term is more widespread as it includes the fitness of (intellectual, social and ethical) because success in life requires multiple intelligence and the ability to control emotions and personal skills [6].

Psychological skills represent an important dimension in preparing players as it plays a main role in developing the performance and has became one of the variables that should be taking care of besides physical, skills and tactical requirements, as the sports international champs are converge significantly in terms of physical, skills and tactical and the psychological factor identifies the result of the players during the competitions where it plays a basic rule in winning [7].

Many athletes clarify that they need several months during the training season for the transition of psychological skills and using it in a good way during competition situations which indicates the significant of considering psychological skills training as a continues process side by side with physical training during the training season [8]. El-Akely [9] has found that brain training aims to develop the individual and get him to the required levels through increasing the kind of ideal performance state by developing associated mental skills.
Sports intelligence is one of the most important factors which might affects the success of the athletic performance, as the individual ability of using his body in an ingenious way and dealing with competitive situation through large and accurate movements of the body; helps on performing in a graceful and coordinating way that achieves harmony between body and mind. The individual mind ability also helps on realizing the place, direction, movements of others and knowing the patterns and motivations of others that affects the way of skills performance [10].

The study of Fahid [11] indicates that the effectiveness of multiple intelligence activities can be checked in the discovery and development talented compared to traditional tests. Also Imam [12] indicates that when comparing multiple intelligences of both normal pupils and those with difficulties in learning, we find that there are differences in the linguistics, logical and musical intelligence also emotional and dynamic intelligence while there are no differences in the interaction of study levels. Doss [13] has noted that there is no relationship between students’ performance to test their physical intelligence and their academic achievements, also the relationship between student with low academic achievements and their performance of dynamic ability test.

Multiple intelligences are considered as cognitive type of how individuals use their multiple intelligences in solving a certain problem, using the brain to reach a solution by any kind of intelligence to solve the educational situation with the help of the teacher or the coach who deals with the individual depending on the type and pattern of intelligence. When the coach knows the type of intelligence of each female player this will help him presenting the suitable learning and coaching methods which helps in delivering the information and learning skills without any effort. Also when the coach chooses the suitable female player in the suitable place and time during the game according to the circumstances and many competitions situations this helps in team success, as the female player who has a dynamic intelligence can deal with the rabid team which move in several places inside the playground. Also the coach can choose the female player who has emotional quiet intelligence in the last minutes of the game because her calm attitude makes her controls her performance and emotions thus she can achieves success in skills performing. the coach is subjected to all this kinds of problems during explaining or applying the lesson or the training may be due to he is not recognizing a type or more of intelligence which helps him dealing with the player and get to know her various ability and to evaluate?

Which kind of intelligence is high and which kind is weak and needs to be developed, the two researches have noticed through their experience as a player, coach and a referee of Handball the lack of a measurement of the sports IQ which measures the type of intelligence of all players which helps the coach to solve the problems of the players during the training or the game where the coach can use visual methods when he has some players have linguistics intelligence, or uses linguistics intelligence when he has some players have social intelligence who need to implement skills or strategy through a cooperative work. Te coach might use spatial intelligence and illustrates the places of the players but some of the players can not apply this because they have linguistics intelligence and they are in need of terms and words to make it easy for them to understand what they are should do. The coach might also explain and present the strategy in various and different ways that match with the players' multiple kinds of intelligence to guarantee the coach successful in implementing the training process as some players understand through the linguistics intelligence side while others with the cooperative side, when the coach realize that it helps him winning the training process.

The two researchers saw the necessity of implementing that research in order to reach to a standard measures this phenomenon as it might helps man players and coaches to solve problems that may occur during the training, teaching and competition which prepares the both player and coach also the referee psychologically to absorb different situations during performing sports movements in all circumstances through competitions intensity and diversity of competitors also stages of the competitions.

From previous illustration the two researchers have found out the urgent need to set up an intelligence sports test to be able to identify intelligence type and degree of every player according to the comparative importance because the sports field lacks this kind of tests in general and Handball in particular.

**Research Goals:**

This research aims to:

- Setting up sports intelligence test in handball.
- Identifying the comparative importance of every type of intelligence.
- Setting up a normative standard of the test.
- Identifying the relationship between sports intelligence and psychological fitness.
Research questions:
The research questions are as follows:

- How to establish a sports intelligence test in handball?
- What is the comparative importance of every type of intelligence?
- What is the normative standard of the test?
- What is the relationship between sports intelligence and psychological fitness?

Terms and Concepts Used in the Research: Multiple intelligences: indicates that intelligence concentrates on how to solve problems and production creator and does not focus on the fact that intelligence is hereditary or environmental and uses several kinds of intelligence such as (linguistics intelligence, logical, musical, spatial, dynamical and social) [1].

Psychological Fitness: a reference to a certain level of standards of psychological health that achieved when a reasonable amount of competition between the personal various aspects might lead the person to a particular type of interaction with himself and with the social environment and this type is characterized by significantly stable with optimizing the satisfaction or reconciliation with the self, as well as with the community (operationally defined).

MATERIALS AND METHODS

Research Methodology: The two researchers used a descriptive approach to its relevance to the objective nature of the research.

Research Community: The research community includes handball players from the age of 13:15 years old.

The Reasons for Selecting the Research Sample and Community:

- Participation in the games.
- Players in the league.
- Registered in the Handball federation.

Research sample

Exploratory Research Sample: They were chosen randomly from Heliopolis, Maadi, Zamalek, El Sahms and El Tayaran clubs, and consists of 110 handball players, the researchers received only 106 forms the rest is might have lost or neglected.

Table 1: Characterization of research community and research basic sample

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Excluded</th>
<th>All</th>
<th>Sample</th>
<th>S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>1</td>
<td>24</td>
<td>El Ahly Club</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>2</td>
<td>21</td>
<td>Nasr City Club</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>3</td>
<td>26</td>
<td>Tlaai El Giesh Club</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>62</td>
<td>9</td>
<td>71</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Research Basic Sample: It was chosen intentionally and consists of 71 handball players from El Ahly, Nasr City and Tlaai El Giesh clubs. Only 62 results were received, meanwhile the rest might have been lost or neglected.

Sample of Experts: The test was presented to a sample of 6 experts for the use of their opinions in emphasizing the validity of the expressions content and tests axes (Attachment 1).

Attachment 1: List names of experts

Name of job description

- d / Sahar Gohar Professor, Assistant Lecturer training games, Faculty of Physical Education, Helwan University
- d / Ola Hassan, Assistant Professor, Department of Training games, Faculty of Physical Education, Helwan University
- d / Layal Labib Professor Emeritus training games, Faculty of Physical Education, Helwan University
- d / Heba Radwan Assistant Professor, Department of Training games, Faculty of Physical Education, Helwan University
- d / Hala Zaki Professor of training games, Faculty of Physical Education, Helwan University
- d / Hamid Abdul Hamid, professor, Department of Training games, Faculty of Physical Education, Helwan University

Percentage of Expert’s Opinion:

<table>
<thead>
<tr>
<th>Type of intelligent</th>
<th>Opinion of experts</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Intelligence</td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>social Intelligence</td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>emotion Intelligence</td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>linguist Intelligence</td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>mental Intelligence</td>
<td>5</td>
<td>83,3%</td>
</tr>
<tr>
<td>musical Intelligence</td>
<td>4</td>
<td>66,6%</td>
</tr>
<tr>
<td>logical Intelligence</td>
<td>5</td>
<td>83,3%</td>
</tr>
<tr>
<td>natural Intelligence</td>
<td>4</td>
<td>66,6%</td>
</tr>
<tr>
<td>personal Intelligence</td>
<td>4</td>
<td>66,6%</td>
</tr>
<tr>
<td>spatial Recognize Intelligence</td>
<td>5</td>
<td>83,3%</td>
</tr>
</tbody>
</table>

Data Collection Tools: The two researchers used data collection tools as follows:

References and researches of the Arabian references which are related to intelligence [2, 12, 14] and from which the concept of multiple intelligences [9, 10, 15] and its theory [7] and the types of intelligences while the previous studies related to the search. The two researchers extract the used standards and tests and identify the themes and phrases [3, 4, 6, 8] as well as identifying the methods of proceeding such a study [14, 16]. They did not found any
previous studies in handball field or sports field in particular, also they did not find such studies on the internet.

**Establishing Cognitive Intelligence Test in Handball:**
The two researchers after analyzing scientific references and previous studies [3, 4, 6, 8] in addition to theoretical readings in this field by identifying the proposed main axes for the test and its contents are as follows:

- Verbal intelligence (using written spoken or language in the sports field in several dimensions "physical aspect, skill aspect, law of the Game).  
- Normal intelligence ( nature including plants, flowers, trees,animals,and birds ) 
- Spatial intelligence (visual perception - spatial visualization – image recognition - artistic creativity).  
- Musical intelligence (distinguishing tones, rhythms and tunes).  
- Dynamic intelligence (spatial ability - Anticipation - sense of direction – sense of time).  
- Logical intelligence (the account) including (to deal with the Numbers, the arithmetic and geometric).  
- Social intelligence (the ability to decision-making - Leadership - Courage - cooperation - self-confidence).  
- Emotional intelligence (anxiety – emotional consult - the aggression)  
- Mental intelligence (attention focusing - mental preparations).  

**A Measure of Psychological Fitness:** The two researchers used a measure of psychological fitness of Dr. Mona Mokhtar [13] and includes the meter on 41 expression with an estimate scale. It happens with a high degree, occurs with a medium degree, occurs with a low degree of code 3;2 and 1, respectively. The degree of greatness of the scale was in 114 degrees.

**Transactions of Scientific Tools for Collecting Data**

**First: Validity:** The two researchers calculated validity in the following ways:

- Arbitrators' trueness.  
- Internal consistency trueness.  
- Differentiation trueness.

**Second: Stability:** The two researchers calculate the stability in the following ways:

- Application testing and retesting (Test Re Test)  
- Alpha Cronbach Stability.

**First: Validity:**

**Arbitrators ' Trueness:** These axes were presented in the period from (01/02/2010 to 02/10/2010) (6) to experts specialized in Handball and sports psychology and science of sports training of professors and faculty members have the experience of 10 years at least and obtained the degree of Ph.D.(Attachment 1 ) to see what they think about the axes of the intelligence test of knowledge and the appropriateness of these themes, the axes of linguistic intelligence, motor, social and emotional got 90% or more of the opinions of experts, the rest of the axes to the axes of got 80% the researcher accepted 90% or more to determine the test axes of the current study, so 6 axes were deleted, namely, (Natural - Spatial - Music - logical - Mental - Self) based on the percentage of each axis, the two researchers developed phrases that fall under each axis and they were 120 phrases and then put the test in its Initial shape during the period from 02/20/2010 to the period from 30/20/2010, the same group of experts to determine the validity of each statement under its own axis and the extent of validity in terms of formulation and language. The phrases that got over 90% or more of the opinions of experts have been tested and the phrases failed to achieve this ratio were excluded also repeated statements that carry more than one meaning. Hence the two researchers have reached (Attachment2).

**Attachment 2:** IQ sports test in handball in final shape by Lamiaa and Nevien

Name: Division:
1. The Speed in hand ball is:
   - Ability to perform repetitive movements.  
   - move the body from one place to another with the acquisition of space  
   - the speed of muscle contraction.  
2. Muscle strength is the most important requirements for the handball player, are:
   - an essential component of fitness.
- The ability of muscle to cope with external resistors.
- The ability of muscle to cope with high intensity
3-Requires the player to move in different directions the player needs:
- Ability. - Flexibility. - Fitness.
4. A player's ability to direct to the target are:
5. Basic skills in handball are:
- Individual offensive skills. - a collective offensive skills.
- Offensive skills individually and collectively
6. To Exchange the ball between players is a skill:
- Jump. – scrolling. - Reception and delivery.
7. Receive the ball used:
- To Control of the ball. - To stop the ball. - To start the attacks.
8. Features of a scroll are:
- strength and flexibility. - Accuracy and speed. long distance and strength.

9. to know how to scroll the player should:
- transfer from one place to another.
- Exchange between colleagues
The link between the motor and the pendulum clock.
10. Pass Albndoleep renamed due to:
- pendulum clock. - Interactive Movement of the clock. -succession pendulum.
11. Arm hold the ball is:
- control the ball. - Arm free.
- Arm behind the body
12- Shooting is:
- the boundary between success and failure of performance. - The line between victory and defeat.
- the line between precision and guidance.
13. Shooting is:
- pass the ball from a specific place. - hit a target in the goal.
- the ball crossing the line between those.
14. Keeping the ball:
- Turn off the ball. - touching the ball. - Acquisition on the ball.
15. Dribbling:
- move the ball from one hand to the other. - Move the ball pitch everywhere -
- exchange the ball between the hand and the earth.
16. Phishing is the following:
- Shuffle inside the stadium. - get rid of the guns. - Change from one setting to another.
17. Striker is the following:
- the attack on the opposing team's goal the performance of offensive skills. - Friction with guns.
18. Defender is the following:
- who defends the goal. The address of the attacker. - a, b together-

Select the two words closer to each other:
19. Scroll (succession _ _ exchange communication).
20. Goal (_ Location _ target area).
21. Speed ??(transmission was _ _ feet).
22. Focus correction _ _ _ scoring disposal.
23. Defense Acquisitions _ _ _ control of disposal.
● Choose from the following words in proximity to the word meaning:
24. Ready to develop _ _ receive (receiver).
25. Map _ _ the vision (the plan).
26. Intervention _ _ Shuffle argument (deception).
27. Capacity _ _ combinations tasks (skills).
28. _ _ attacker confronts the defender (opponent)
completed the words in each box so that you read all of them in the clockwise direction:
29- (p-l-n-a) (a-a-c-t-k-t )
30- Surprise attack
Defensive actions
31- (b-a-k-r-e-)
32 – a-t-s-f-) (b-a-k-r-e-)
l-a-l-b-) 33- (d-e-n-c-e-a-f-e-a-r-e- ) (h-e-t-(h-l-d-o 33-a
There are many positions you choose the best suitable
disposal of mark / in front of the appropriate phrase:
35. Right winger cut on the circuit defender what to do?
  ● move with the attacker.
  ● Delivery of the attacker to fellow defender next to him.
  ● reserve striker before his move.
36. Player has a lightning attack and reached defender before shooting How to behave?
  ● correction.
  ● passing to a colleague.
  ● deceive the defender then feint.
37. Ball with the average of the attack and went out of his guns to pass?
  ● right-back.
  ● the heart of the defense.
  ● the right wing.
38. The highest scoring of any region?
  ● The right side.
  ● Middle of the goal.
  ● The left side
39- An offensive player with the defender how to act to receive the ball from the player on the right side?
  ● being in the right direction of the player.
  ● Deception in the left direction and then move in the direction of the player.
  ● bones in the direction of the ball.
40. A surprise attacks on the anti-keeper what to do to guard?
  ● cut the ball before it reaches the offensive player.
  ● Waiting in the goal.
  ● Directing the nearest player was a defender of and defense.
41. The best squad for the White team in the implementation of criminal is the pitch:
42. If you are in this center what is the best disposition of your choice?
  ● attack no.2 pass the ball to No. 6 then shooting on goal
  ● attack no.2 pass the ball to No. 5 then shooting on goal
  ● attack no.2 pass the ball to No. 3. then shooting on goal
43. Attack three passes to 2 for shooting:
  ● attack 3 to 6 pass to shoot.
  ● attack 3 pass to 5 or 7 to shoot.
  ● attack 3 passes to 2 and then book the defender.
44. Attack 4 to 6 pass to shoot:
  ● attack 4 to 7 passes for correction.
  ● Attack four pass to 5 or 3 for shooting.
  ● attack four aims on the target.
45. When have you done any skill you performed well?
   - No. - Sometimes. - Yes.
46. Played any missions you choose?
   - Defend against staunch defender. - only do the attack. - to act as appropriate for your abilities.
47. Coach implementation of a specific plan and you are not convinced:
   - Do you insist what you want? - Is it out of the stadium? - Do you agree and implement what I command you?
48. Do you think too much in training and the extent of your success in the performance?
   - Yes. - Sometimes. - No.
49. Are you happy with your skills?
   - Yes. - Sometimes. - No.
50. Did you have had the best level of performance during the difficult situations of the match:
   - Yes. - Sometimes. - No.
51. When i achieve goal I express my joy of physical activities:
   - Yes. - Sometimes. - No.
52. Better learn new skills through friction in matches:
   - Yes. - Sometimes. - No.
53. I imagine the skill and I see that your eyes closed:
   - Yes. - Sometimes. - No.
54. I move to the right place during a tight defense:
   - Yes. - Sometimes. - No.
55. I guess that moves before his opponent for the skill:
   - Yes. - Sometimes. - No
56. When you make a decision in the competition:
   - Do you take the decision without thinking about the consequences?
   - Do you take the decision according to the nature of the situation?
   - Do you take the decision and react quickly?
57. You are asked to help your colleague in the implementation of a joint plan to cooperate with him and you do?
   - do not help. - help him. - Ask the coach.
58. Facing position similar to the previous position in a successful match is to take the decision taken by himself before?
   - would you have to think again. - Sometimes. Yes.
59. Prompted by a colleague to avoid playing with him and another colleague, what will you do?
   - cooperate with him. - do not cooperate with him but I give permission. - Do not co-operate at all.
60. I heard the obscene words during the match or training directed to you:
   - Do you react to it with the same words? - Non-refundable and graduated from the stadium? - answered by the polite words?
61. Better my decisions when I'm inside the stadium:
   - Yes. - Sometimes. - No.
62. Better spend my free time playing the game and training:
   - Yes. - Sometimes. - No.
63. Better teamwork on the unilateral action:
   - Yes. - Sometimes. - No.
64. Has at least three friends in the team
   - Yes. - Sometimes. - No.
65. I challenge others when you perform or learn a new skill:
   - Yes. - Sometimes. - No.
66. I feel comfortable practicing handball for individual games:
   - Yes. - Sometimes. - No.
67. I feel comfortable and happy when the collective implementation of the plans:
   - Yes. - Sometimes. - No.

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68. Do you help others during the blitz?
- Yes. - Sometimes. - No.
69. Do you recognize our own mistakes when performance is in defense and attack?
- Yes. - Sometimes. - No.
70. Do you bear the physical and psychological pressure in critical situations in the competition?
Yes. - Sometimes. - No.
71. in difficult situations during the game is characterized by emotional stability?
- Yes. - Sometimes. - No.
72. Are you afraid to get fall down in matches?
- Yes. - Sometimes. - No.
73. Are you afraid of entering the attacker?
- Yes. - Sometimes. - No.
74. Can you scare easily?
- Yes. - Sometimes. - No.
75. Are you keen too much?
- Yes. - Sometimes. - No.
76. Are you afraid the opposition coach and colleagues?
- Yes. - Sometimes. - No.
Circle the correct answer:
77. Are you interested in the development and the development of your abilities and skills in the match or during training?
- Yes. - Sometimes. - No.
78. Are you planning to which goals do you want?
- Yes. - Sometimes. - No.
79. Do you think you will discuss with the coach if you show?
- Yes. - Sometimes. - No.
80. When a problem occurs during the training do you think in a realistic and objective?
- Yes. - Sometimes. - No.
81. If you are offered to be Chairman of the Working will you agree?
- Yes. - Sometimes. - No.
82. During the defeat in games do you trust the team members and act in good positions?
- Yes. - Sometimes. - No.
83. Are the coach calls you in training excellent and efficient in performance?
- Yes. - Sometimes. - No.
84. Do you feel free to do with new skills that are unusual?
- Yes. - Sometimes. - No.
85. does the title some of your colleagues you concealed
- Yes. - Sometimes. - No.
86. Do you feel guilty when you defeat the game?
- Yes. - Sometimes. - No.
87. Do you have lack of sleep and a loan of your fingers before the game?
- Yes. - Sometimes. - No.
88. When you take a break from training Are you relaxed fully?
- Yes. - Sometimes. - No.
89. Carelessness training when you feel confused and guilty?
- Yes. - Sometimes. - No.
90. Are you under great psychological pressure, especially when the coach asked the implementation of a specific plan?
- Yes. - Sometimes. - No.
91. I like to watch the games:
- Yes. - Sometimes. - No.
92. I love to draw graphics while thinking of something:
   - Yes. - Sometimes. - No.
93. How many times have you the red face because of the narrow or shame?
   - a lot. - Sometimes. - a little.
94. How many times have your life affected as a result of stress?
   - a lot. - Sometimes. - a little.
95. Do you shout at your colleague because he did not cooperate with you?
   - a lot. - Sometimes. - a little.
96. Do you think that the attack was the best means of defense?
   - a lot. - Sometimes. - a little.
97. How many times they left you to feel?
   - Less than 3. - Between 3 _ 6. - More than 6 times.
98. I was upset at what I learned from what did you reserve the game?
   - Yes. - Sometimes. - No.
99. Do you react to exchange use words of insults?
   - Never. - Sometimes. - a little.
100. If a player should hurt you in the game what is your reaction?
    - Do not do anything. - speak with him quietly. – revenge
101. if you angry do you hit the ball and reacted with your foot or increase your strength to others?
    - a lot. - Sometimes. - a little.
102. Do you accept defeat with an open mind?
    - Yes. - No. - Sometimes
103. I find it difficult to sit on the bench:
    - Yes. - Sometimes. – No
The first image the test
Intelligence testing in sports Handball 120 words
The second image of the test
Intelligence testing in sports Handball 110 words
The third image the test
Intelligence testing in sports Handball 103 words
Table shows the final phrases
Total Themes
Axis I: linguistic intelligence
   Selection of verbal 18
   Synonymy 10
   Representative measure 6
Axis II: Kinesthetic intelligence
   Spatial ability 7
   Projection 3
   Recognition performance 11
Axis III: Social intelligence
   Take Resolution 7
   Collaboration 5
   Courage 9
   Self-confidence 9
Axis IV: Emotional Intelligence
   Mental readiness 7
   Provoke emotione 11
Total 103
Table 2: Amendments done by the experts

<table>
<thead>
<tr>
<th>Total after amendments</th>
<th>Excluded</th>
<th>Amendments</th>
<th>Total</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total phrases after amendments and excluding 110 phrases</td>
<td>10 phrases</td>
<td>11 phrases</td>
<td>8, 9, 13, 86, 105,106, (4 ' 20 ' 24 ' 38 ' 39' 40)</td>
<td>Recognition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>107, 108,109,115)</td>
<td>Handball Test</td>
</tr>
</tbody>
</table>

The two researchers have made these changes and determine how to correct the measurement as the correct answer scores one point and the wrong answer is zero.

**Internal Consistency Trueness:** The two researchers have made internal consistency trueness during the period from 03/10/2010 to 03/20/2010 on a sample of 110 handball players with the purpose of making sure that the test was able to distinguish between individual with various ability by correlation accounting and then delete the phrases that not functioned statistically by calculating the correlation coefficients of each term and its tests and the link between the test and testing a whole application on the sample reconnaissance in order to ensure the safety and ease of understanding language test and concluded that the correlation coefficient indicative of the sincerity of the internal consistency of statements and questions testing knowledge of handball varied between 0.165 and 0.613 and that all are with statistical significance except the phrases number 1.4 (no1= 0,020, and no4= 0,157) of the axis of courage and the phrase number 7 of the axis of self-confidence (no7= 0,098) and phrases, number 1.6 (no1= 0.135, and no6= 0,079) of the axis of readiness, mental and phrases number 1.8 (no1= 0.143 and no8= 0.161) of the axis of emotional arousal and that the correlation coefficient of the internal consistency trueness of the terms of psychological fitness standard ranging from 0.165 in level 0.05 and these phrase less than 0.164 so I do not take it.

**Differentiation Trueness:** To identify the validity coefficient of the axes of the test despite the fact that agreement among experts on the validity of the test is one of the truthful tests, the two researchers find coefficient Differentiation trueness through applying the test on a distinct sample and indiscriminate sample at the same efficiency of the research sample and the results confirm the existence of significant differences which confirms Differentiation trueness of the test.

**Second: Stability:** The two researchers calculated the stability of both the test and the standard in two ways as follows:

**Applying the Test and re Test:** During the period from 01.04.2010 until 04.10.2010, through connecting between each statement and its counterpart in the second application showed correlation coefficients degrees of statistical significance ranged between 0.611 and 0.963 in the recognition test and ranged between 0.487 and 0.900 in the standard of psychological fitness.

After the two researches have made the stability it became clear that all axes expressions are with statistical significant, bringing the total number of the test phrases to 103 phrases divided on the axes of recognition test in Handball and the total number of standard phrases (41 phrases).

**Cronbach Alpha Stability:** The two researchers have found the correlation coefficient of Cronbach alpha to ensure the stability of the axes of cognitive test in handball and Psychological fitness standard grades have ranged between 0.519 and 0.712.

Ismail [17] has reached compound with using Cronbach Alpha stability by the two researchers as the value of linguistics intelligence was 0.715 and logical intelligence 0.823 and spatial 0.798 and musician 0.838. The dynamical intelligence was 0.734 and the value of coefficient alpha ranging from 0.715 to 0.838, which indicates that the card has, high degrees of stability. Thus, the first question of the research has been answered which is "How to build a test for intelligent sports in handball?".

The two researchers have reached the standard levels of the cognitive test for Handball as follows:

- Very weak: 10% or less
- Poor: More than 10% - to less than 20%
- Acceptable: more than 20% - to less than 40%
- Good: More than 40% - to less than 60%
- Very good: more than 60% - to less than 80%
- Excellent: more than 80% - to less than 100%
Table 3: Normative levels of cognitive test in handball

<table>
<thead>
<tr>
<th>Normative levels Verbal / descriptive</th>
<th>Percentage</th>
<th>Total</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very weak</td>
<td>0.9%</td>
<td>146.00</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3.8%</td>
<td>149.00</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>6.6%</td>
<td>152.00</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>5.7%</td>
<td>154.00</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5.8%</td>
<td>155.00</td>
<td>5</td>
</tr>
<tr>
<td>Weak</td>
<td>3.12%</td>
<td>156.00</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>1.15%</td>
<td>157.00</td>
<td>7</td>
</tr>
<tr>
<td>Acceptable</td>
<td>20.8%</td>
<td>158.00</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>21.7%</td>
<td>159.00</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>25.5%</td>
<td>160.00</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>31.1%</td>
<td>161.00</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>34.9%</td>
<td>162.00</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>38.7%</td>
<td>163.00</td>
<td>13</td>
</tr>
<tr>
<td>Good</td>
<td>42.5%</td>
<td>164.00</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>45.3%</td>
<td>165.00</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>49.1%</td>
<td>166.00</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>54.7%</td>
<td>167.00</td>
<td>17</td>
</tr>
<tr>
<td>Very good</td>
<td>60.4%</td>
<td>168.00</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>64.0%</td>
<td>169.00</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>66.0%</td>
<td>170.00</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>75.5%</td>
<td>171.00</td>
<td>21</td>
</tr>
<tr>
<td>Excellent</td>
<td>81.1%</td>
<td>172.00</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>83%</td>
<td>173.00</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>84%</td>
<td>174.00</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>86.8%</td>
<td>175.00</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>87.7%</td>
<td>176.00</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>89.6%</td>
<td>177.00</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>92.5%</td>
<td>179.00</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>94.3%</td>
<td>180.00</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>97.2%</td>
<td>184.00</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>99.1%</td>
<td>186.00</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>189.00</td>
<td>32</td>
</tr>
</tbody>
</table>

The Basic Experiment: Where the two researchers applied the test of knowledge and the measure of psychological fitness in its final shape (Attachment 3) on a sample of research of 71 handball players in the period from 01/05/2010 until 05/25/2010 where the two researchers have interviewed a sample search directly for the opportunity to follow-up and explain the contents of the test and measurement.

Attachment 3: Psychological Fitness
Measure of psychological fitness (Mona Mokhtar)
Name:.................................
Type sport:.............................
Age:.....................................
Club Name:............................
Years of practice:.....................
Dear sports:

The following set of statements which express your opinion are about yourself and your personality in sports, LTTE answer truthfully what you think how the importance of sports improved your image and personality.
Note that there is no incorrect answer and wrong, but should explain honestly what you think through the balance of a three-degree (high medium low) by ticking (□) the box that express your opinion mostly.

My expressions occur degree

(High medium low)

1- always trying to help my colleagues in the stadium
2- behave in ways inappropriate for the wounded around me
3- do my utmost effort to achieve my goals
4- I control my emotions during the performance
5- I can understand the feelings of others in the stadium
6- my actions towards the management of the club are fit and commitment
7- I can face the changing attitudes during the competition
8- I stay calm in the face of pressures training hard
9- I can control the state of stress after a hard training
10- I am in communion with my colleagues in the performance Whatever the circumstances of the match
11- worst in the formation of lasting friendships with my team
12- I can afford a lot of suffering in training to achieve my goals
13- I can continue to practice the same sports activity
14- I can achieve sporting excellence under any pressure
15- I find it difficult to take into account the feelings of others when I am exposed to the defeat
16- I can keep my colleagues I was affiliated with for long periods
17- I find it difficult to overcome the frustration after the defeat of my exposure to the match
18- I directed my thinking to decide my plans to change the circumstances of the match
19- positive emotions throughout the performance period
20- I find it difficult to support members of the team in critical situations
21- I find it harder to cope with foreign coach
22- blamed the coach if failed to win
23- I enjoy the exercise activity whatever the pressures
24- I can take anything to myself after hard training
25- I find it difficult to listen to the personal problems of colleagues
26- I think I am not a social center of my team
27- I take responsibility for mistakes during the match
28- I find it difficult to accomplish assigned tasks in case of fatigue
29- arbitrary in my heart help me performance
30- has the ability to deal well with the coach
31- team members avoid participation in social activities
32- I think that the achievement of sporting excellence has no value to him I have
33- I find it hard to hide feelings of fear of competition
34- has the ability to develop trust between team members
35- I have difficulty in harmony with the ruling even if he was right
36- has the ability to control my emotions during critical situations
37- I treat my team as I like them to treat me
38- I urge my colleagues to express their feelings in case of defeat
39- I have difficulty in dealing with my feelings when exposed to any pressure
40- behave in an inappropriate manner embarrass the feelings of my colleagues in the event of failure
41- Able to deal with negative emotions during the performance.
Statistical treatments:
Statistical treatments were used as follows:

1. The arithmetic average
2. The standard deviation.
3. Pearson correlation coefficient.
4. Differences using the value of "Z"

RESULTS AND DISCUSSION

Based on the results of the data and statistical treatments and sample size, the community and studies related to the reference in the light of research questions and objectives of the two researchers to discuss and interpret the results as follows:

Tables 4 and 5 show a positive correlation connection that statistically significant between selection of the verbal and psychological fitness synonymy, Fitness psychological, linguistic intelligence and psychological fitness capacity of spatial and Fitness psychological expectation and Fitness psychological perception of performance and fitness psychological, dynamic intelligence and psychological fitness, decision making and psychological fitness, cooperation and psychological fitness, self-confidence and fitness psychological, social intelligence and psychological fitness.

Table 4: Correlation matrix between the cognitive test for handball and the scale of psychological fitness

<table>
<thead>
<tr>
<th>Co Operation</th>
<th>Decision-making</th>
<th>Dynamic Intelligence</th>
<th>Recognition performance</th>
<th>Expectation</th>
<th>Spatial ability</th>
<th>Linguistic intelligence</th>
<th>Analog measurement</th>
<th>Synonymy</th>
<th>Verbal selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.699*</td>
<td>0.084</td>
<td>0.091</td>
<td>0.022</td>
<td>0.040</td>
<td>0.055</td>
<td>0.290*</td>
<td>Synonymy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.087</td>
<td>0.076</td>
<td>0.002</td>
<td>0.191</td>
<td>0.217*</td>
<td>0.164</td>
<td>0.804*</td>
<td>0.075*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.053-</td>
<td>0.125</td>
<td>0.132-</td>
<td>0.112</td>
<td>0.246*</td>
<td>0.079</td>
<td>0.488*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.060</td>
<td>0.127</td>
<td>0.258*</td>
<td>0.136</td>
<td>0.267*</td>
<td>0.160</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.136</td>
<td>0.028-</td>
<td>0.727*</td>
<td>0.153</td>
<td>0.067</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.010</td>
<td>0.043</td>
<td>0.376*</td>
<td>0.079</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.037-</td>
<td>0.093</td>
<td>0.729*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.063</td>
<td>0.052</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.041</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Correlation matrix between the cognitive test for handball and the scale of psychological fitness

<table>
<thead>
<tr>
<th>Dynamic Intelligence</th>
<th>Recognition performance</th>
<th>Expectation</th>
<th>Spatial ability</th>
<th>Social Intelligence</th>
<th>Self Confidence</th>
<th>Courage</th>
<th>Axes</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.699*</td>
<td>0.084</td>
<td>0.091</td>
<td>0.022</td>
<td>0.040</td>
<td>0.055</td>
<td>0.290*</td>
<td>Synonymy</td>
</tr>
<tr>
<td>0.309*</td>
<td>0.071-</td>
<td>0.069-</td>
<td>0.029-</td>
<td>0.100</td>
<td>0.039</td>
<td>0.188</td>
<td></td>
</tr>
<tr>
<td>0.027</td>
<td>0.063</td>
<td>0.035</td>
<td>0.060</td>
<td>0.087</td>
<td>0.030-</td>
<td>0.031</td>
<td>Analog measurement</td>
</tr>
<tr>
<td>0.759*</td>
<td>0.059</td>
<td>0.056</td>
<td>0.026</td>
<td>0.053</td>
<td>0.055</td>
<td>0.141</td>
<td>Linguistic intelligence</td>
</tr>
<tr>
<td>0.419*</td>
<td>0.197</td>
<td>0.191-</td>
<td>0.080-</td>
<td>0.043</td>
<td>0.055</td>
<td>0.057-</td>
<td>Spatial ability</td>
</tr>
<tr>
<td>0.315*</td>
<td>0.020-</td>
<td>0.027</td>
<td>0.069-</td>
<td>0.052-</td>
<td>0.091-</td>
<td>0.088-</td>
<td>Expectation</td>
</tr>
<tr>
<td>0.335*</td>
<td>0.212*</td>
<td>0.199-</td>
<td>0.094-</td>
<td>0.097-</td>
<td>0.163</td>
<td>0.130</td>
<td>Recognition performance</td>
</tr>
<tr>
<td>0.256*</td>
<td>0.231*</td>
<td>0.126-</td>
<td>0.048-</td>
<td>0.092-</td>
<td>0.139-</td>
<td>0.063</td>
<td>Kinesthetic intelligence</td>
</tr>
<tr>
<td>0.351*</td>
<td>0.086-</td>
<td>0.070-</td>
<td>0.054-</td>
<td>0.577*</td>
<td>0.301*</td>
<td>0.210-</td>
<td>Decision-making</td>
</tr>
<tr>
<td>0.280*</td>
<td>0.056-</td>
<td>0.221-</td>
<td>0.185</td>
<td>0.478*</td>
<td>0.097</td>
<td>0.046-</td>
<td>Cooperation</td>
</tr>
<tr>
<td>0.007</td>
<td>0.098-</td>
<td>0.075-</td>
<td>0.065-</td>
<td>0.398*</td>
<td>0.180</td>
<td></td>
<td>Courage</td>
</tr>
<tr>
<td>0.322*</td>
<td>0.033-</td>
<td>0.138-</td>
<td>0.127</td>
<td>0.717*</td>
<td></td>
<td></td>
<td>Self-confidence</td>
</tr>
<tr>
<td>0.449*</td>
<td>0.127-</td>
<td>0.222*</td>
<td>0.079</td>
<td>Social intelligence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.198</td>
<td>0.623*</td>
<td>0.036</td>
<td></td>
<td>Mental readiness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.076</td>
<td>0.804*</td>
<td></td>
<td></td>
<td>Provocation emotionally charged</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.177</td>
<td></td>
<td></td>
<td></td>
<td>Measure of mental fitness</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The two researchers saw the positive correlation between the selection of the verbal and total test linguistic intelligence and synonymy and the total test linguistic intelligence and intelligence test linguistic and expectation, the total intelligence test linguistic and total intelligence dynamic test and test linguistic intelligence and psychological fitness verbal intelligence include (using written or spoken language in sports field in several dimensions such as physical aspect skill aspect and law of the game,) are regarded as multiple intelligences model used by individual to solve a problem and access to a solution by any kind of intelligence and with the help of a teacher or coach who deals with the individual as the style and type of intelligence when the coach know the type of intelligent player is assisted by to provide teaching aids and appropriate training that help to deliver information and skill without making any effort I have noticed a much more non-availability of a measure of the intelligent sports measure the type of intelligence to the players, which helps to solve the problems faced by the players some of them have the intellect to seduce those who have social intelligence.

This is combined with what Fahid [11] has reached. The very fact that it can be the discovery of gifted students and identified and increasing their numbers compared by tests psychometric traditional and that there is no statistically significant differences concerning the variable of sex and age in the performance of the activities.

Also, it is consistent with the findings of Imam [12] The very fact that there are significant differences in musical intelligence by school classes levels and the presence of statistically significant differences by differences in learning in each of the linguistic intelligence and logical intelligence mathematician and intelligent music and sense intelligent, as shown by the absence of significant differences in multiple intelligences by the interaction between grade levels and differences in learning and the results indicated also that there were differences in after intelligence music for the pupils normal while others have found differences in linguistic intelligence with the top students curriculum.

This is combined with what Abdel-Qader [4] has reached that the effectiveness of the training program to instill in teachers of Arabic, Saudi Arabia, the skills to use multiple intelligences in teaching Arabic language for students in sixth grade, built as a results also impact positive for the training program on achieving and innovating in the Arabic language among the pupils of teachers who have undergone the training program.

It is clear from Table 5 the relations inverse correlation statistically significant between selection of the verbal and courage, understanding, performance and emotional intelligence, intelligence and dynamic emotional intelligence, cooperation and raise emotions, social and emotionally charged excitation.

The two researchers found out a correlation between the selection of the verbal and the realization of performance and recognition of performance and total intelligence test motor and recognition of performance and psychological fitness. The psychological skills represent an important dimension in the preparation of the players are playing a key role in the development of performance, it is concepts that have emerged recently in the heritage psychological It stresses the need to deal with the player in terms of psychological skills and psychological fitness, which includes intellectual, moral and social intelligence which is complementary to the multiple and include aspects of emotional and mental.

This is combining with what Ali [18] has reached that the program relaxed cascade proposed for the swimmers had led to lower anxiety physical to the beginners swimming and also to decrease anxiety of knowledge and the high state of self-confidence and high level of their performance in the competition.

However the findings of Doss [13] in terms of the absence of differences between the performance of students on the choice of physical dynamic intelligence and their school achievements, as shown by the correlation between the achievement of students with achievement and low-performance on the test standard ability kinetic significant improvement in their performance on the test Kinetic measurement of capacity. This is combine with what El-Akely [9] has reached of a definition for the concept of mental training as a kind of training to reach a state through the development of mental skills.

The researcher believes a correlation inverse statistically significant between the selection of the verbal and courage and awareness of performance and total emotional intelligence and the total intelligence test motor and total emotional intelligence, cooperation and stimulation emotional and total test social intelligence and stimulation emotional selection, verbal is not to use obscene words during the match or training when emotion and must behave in difficult situations or when the emotion and the use of the sporting spirit when you hear comments coming out of the public.
And the moral courage and commitment during training or play the game and recognize the mistakes in the performance when the defense and attack and carry physical and psychological pressure in critical situations in the competition and emotional stability. And recognition of performance and emotional intelligence must strive to acquire the emotional stability in difficult situations and good performance and dispose of and realize the skill and efficiency in performance and if some error occurs in the defense or attack.

The dynamic intelligence is the ability to perform repetitive movements and speed to move the ball everywhere pitch and move the district in the right place during the defense and intelligence on the movements of rival guess before the performance.

Cooperation and collective action in the collective implementation of the plans during play in the match and cooperation is one of the best behaviors among people, it is based on building effective, success and happiness in the work of collaborators.

This is consistent with what Khataybeh [5] has reached which outweigh the impact of a strategy of multiple intelligences to the traditional method of students of science in the field of basic science and the superiority of female students in the acquisition of basic science and also agreed with Teele [19]. The results showed that reliability coefficient showed statistical significant and the correlation coefficient for the stability of linguistic was 0.444 and mathematical intelligence recorded 0.694 and spatial was 0.497, while the musical intelligence was 0.419, which indicates the enjoyment of the list honestly and high stability. Thereby achieving the fourth goal of the research by answering the fourth question which reads: "What is the relationship between intelligence and mathematical mental fitness?"

**CONCLUSION**

In the light of the objectives of the research and the community sample and data collection tools and statistical process research reached the following findings:

- Improved intelligence test of language is linked to improved mental fitness.
- Improved intelligence test motor is linked to improved mental fitness.
- Improve the social intelligence test linked to improved mental fitness.
- Build a measure of intelligence in the motor Handball transactions with high validity and reliability.

**Recommendations:** Researchers recommend the following:

- Apply knowledge of intelligence testing in the handball players and the players maintain their previous levels and different ages.
- Build a replica of tests to be applied to other activities.
- The application of the test on the players to know how to handle any type of intelligence is to deliver information easily and get the desired results with minimal effort and time.
- Attention to the psychological fitness of the players in the handball and other sports activities.

**REFERENCES**


