The effect of the Mental Toughness exercises on the level of the achievement motivation for the volleyball female players

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Introduction:
The nature of high sports levels require the individual to use his entire physical, skillful, planning and psychological abilities for reaching the best possible level. The principals and methods of the physical, skillful and planning preparing have become very close to each other largely during the last years, thus, the need for more caring and attention has occurred.

Osama Rateb (2000) indicates that the sports success depends on the players’ usage to their psychological abilities not less than using their physical abilities. Since the psychological abilities help the individuals to mobilize their physical energies and abilities for achieving the best sports performance.

sees that the psychological skills play basic role in developing the performance and it is considered as one of the basic requirements that must be focused alongside the physical, skillful and planning requirements. The fighters who have the psychological abilities are those who are able to face the requirements of fighting, since the psychological factor defines the result of the fighters during the competition and plays an important role in winning the game.

adds that the trainers and the sports men emphasize that the psychological skills reflect the mental firmness contributes a rate not less than 50% in achieving the sports achievement.

mentioned that the mental firmness is the natural psychological edge that enables the fighter to perform firmly and better than his competitors with keeping the trust, flexibility, control, concentration and determination under pressure.

Mohammed Alawy (1998) sees that the person who has high rate of the mental firmness accepts the criticism without feeling any harm. He also becomes worried when he
loses a match or plays badly. This type of the sports individuals can restore his natural state quickly when he exposes to hard or disappointing experiences and he\ she can perform the violent exercise without the need for more encouragement from the trainer and the player usually doesn’t depend on the team members in his own matters (13:19).

The subject of motivation is one of the most subjects that arouse the attention of large number of researchers. The importance of this subject returns that "there is a motive behind each behavior".

The motives are "state of intension which indicates to the behavior in certain circumstances, directs and affects it". The directing of the individual's motives is an educational and professional directing to find his way in this world with different and various specializations and it is one of the most important problems that face the society in the modern age, in particular that the society needs to the youth who work and produce not the youth who have only amount of science and knowledge.

The levels of the motivation for the sports are affected by certain motives and this effect differentiates from an individual to another. Some sports individuals' response better on listening to the trainer's instructions to make more efforts. Moreover, we find that granting the rewards, changing the players' places in the playing plan, entrusting the sports with certain responsibility, punishing or warning the player are means that can be used with the sports individuals. Thus, it is better to recognize the sports personality in order to be able to choose the proper method for motivation to be used on the request without putting the whole individuals of the group under the same treatment (15:107) (20: 22).

Through the objective notice by the researcher and her work as a third degree referee in Al Menya region for volleyball, she noticed that the female players are required to show high level of concentration for reaching the highest level and to show high rate of the mental firmness for the female players of volleyball
in particular. This appears clearly through the competitions and the players' failure in some attempts of playing the beginning play, for example, we find that some girl players perform well during the daily exercises but they fail to perform this skill during the match. This arouse the researcher's attention who attributes this matter to the psychological state of the players, thus, the researcher saw that the research variable should be subject to testing (the mental firmness) of the volleyball female players, since this game requires high level of concentration and depends largely on the players' trust in their psychological abilities which are represented in their motives for the achievement. This motivates the researcher to conduct this study to recognize the effect of the mental firmness exercises on the level of the achievement motivation for the volleyball female players in Al Menya city.

**Aimed:**

This research aims to recognize the effect of the mental firmness exercises on the level of the achievement motivation for the volleyball female players in Al Menya city.

**hypothesis**

- There are differences with statistical significance between the pre and after- measurement in the level of the achievement motivation for the volleyball female players, the experimental group of the research.
- There are differences with statistical significance between the pre and after- measurement in the level of the achievement motivation for the volleyball players, the research control group.
- There are differences with statistical differences between the two means of the pre and after measurements for the two groups of the research (experimental and control groups) in the level of the achievement motivation for the interest of the volleyball players (the research experimental group).

**Method:**

The researcher has used the experimental methodology by designing the pre and after measurement for the two groups, experimental and control groups, because it is proper to the research nature, goals and hypothesis.
Sample:
The research sample was chosen intentionally from the female players of the volleyball team at the faculty of physical education- Al Menya University (20 students), they were divided into two equal groups, each group consists of (6) students in addition to (8) students for executing the scientific coefficients and the exploratory study of the research.

Instruments
- Restamer equipment for measuring the weight of the body height.
- Measurement tape.
- Stop watch for defining the times of performance and rest that are approximated to the closet (0.01) second.

1- Gow Willes' measurement for measuring the level of achievement motivation in the light of (Mackilan and Atekson) model regarding the need for achievement and preparing it in Arabic language. In the light of applying some initial applications in the Egyptian environment to sample of the sports players, the research was limited to the dimensions of the motive of success achievement and the motive of avoiding the failure. The clauses of these dimensions reached (20) clauses only, the students answer the list clauses that are found on five points scale (very large degree- large degree- middle degree- low degree- very low degree).

Discussing & Results

Table (1)
The significance of the statistical differences between the pre and after measurement of the experimental group in the achievement motive (n= 6)

<table>
<thead>
<tr>
<th>The variables</th>
<th>Measurement Unit</th>
<th>Pre-measurement</th>
<th>After-measurement</th>
<th>Difference between the two means</th>
<th>Rate of improvement</th>
<th>Calculating of (T) value</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement motive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motive of success achievement</td>
<td>Degree</td>
<td>10.15</td>
<td>12.17</td>
<td>2.02</td>
<td>%40.1</td>
<td>*2.2</td>
<td>significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.6</td>
<td>19.1</td>
<td>1.5</td>
<td>%9.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motive of avoiding the failure</td>
<td>Degree</td>
<td>11.53</td>
<td>11.11</td>
<td>0.4</td>
<td>%3.7</td>
<td>*2.1</td>
<td>Significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15.9</td>
<td>11.1</td>
<td>4.8</td>
<td>%30.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table value of T is at the significance level (0.05) = 2.14

Table (1) shows that the two means of the pre and after measurements of the statistical significance between the experimental group in the test
of the achievement motive for the interest of the after-measurement, since the value of calculated (T) is higher than the table value at the significance level (0.05).

In this regard, Mohammed Al Araby (1996) indicates that it a type of the exercises which proved its effectiveness in the way that used for the mastery of the sports skills, in the same time it reduces the risks of the sports injuries and the reactive withdrawal which accompanies the excess training.

The researcher sees that concerning with developing the mental firmness affects the development of the psychological abilities and it improves the level of the skillful performance through increasing the confidence and motive of the achievement for the volleyball female players and through controlling the negative energy through non-thinking of the beat or non-performing well which will lead to the increase of tensions and excitement which affect negatively on the match outcome.

These results agree to what was mentioned by Magda Ismaeil (2006) that the degree of motivation is affected by the individual's trust in his abilities and talents. Unless the player is convinced that she has the talent of achieving the required performance and reaching her goal, she will not make the hard effort and work required for achieving the goal (11:23).

Magda Ismaeil and Osama Abdel Rahman (2007) added that the self-modernization is one of the performance requirements since it considered as a vital dimension in the training and competition fields with its all levels. The sports individual's ability to employ the positive self-modernization is one of the decisive factors that affect directly on performing the different sports skills (10:5).

This agrees to what was indicated by Ibrahim Abdel Hameed (2010) and Osama Rateb (20000) that the achievement motivation is one of the most important factors that help the individual in going ahead in the life, since the achievement is the true weapon that has the ability to restore the self-confidence without losses and it always relates strongly to the self-wellness and the trust increase. The human will not be sound
or hard working unless he recognizes completely his abilities and potentialities and being aware with his social and personal situation.

**Table (2)**
The significance of the statistical differences between the pre and after measurement of the control group in the achievement motive (n= 6)

<table>
<thead>
<tr>
<th>The variables</th>
<th>Measurement Unit</th>
<th>Pre-measurement</th>
<th>After-measurement</th>
<th>Difference between the two means</th>
<th>Rate of improvement</th>
<th>Calculating of (T) value</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement motive</td>
<td>Motive of success achievement</td>
<td>Degree</td>
<td>11.9</td>
<td>11.1</td>
<td>0.8</td>
<td>11.2</td>
<td>10%</td>
</tr>
<tr>
<td>Achievement motive</td>
<td>Motive of avoiding the failure</td>
<td>Degree</td>
<td>11.2</td>
<td>11.0</td>
<td>0.7</td>
<td>11.1</td>
<td>10%</td>
</tr>
</tbody>
</table>

The table value of T is at the significance level (0.05) = 2.14

Table (2) shows that there are differences with statistical significance between the two means of the pre and after measurements of the control group in the test of the achievement motive for the interest of the after-measurement, since the value of calculated (T) is higher than the table value at the significance level (0.05).

In this regard indicates to the importance of setting a goal for the players, since it is considered the base on putting psychological training program. Moreover, we find that setting the goal is followed directly by working on achieving this goal with motivation and self-confidence. The player who aims to improve her physical fitness must train hard for achieving this goal.

AL ArabyShamaown (1996) clears that the relaxation leads to reducing the effect of responding to the nervous stress and help to reach the ideal level of tension and prevent the accumulation of the nervous stress by working on reaching a low level of the base tension and reaching a degree of the deep relaxation in which the tension is reduced to be under the base level.

In this regard, emphasize that the players who lack the positive psychological features cant achieve the highest levels whatever their abilities and their physical and technical skills are.
Accordingly, the second hypothesis has been achieved, which indicates that there are differences with statistical significance between the pre and after measurement in the level of the achievement motivation for the volleyball girl players (the control group).

Table (3)
The significance of the statistical differences between the pre and after measurement of the experimental group in the achievement motive (n= 12)

<table>
<thead>
<tr>
<th>The variables</th>
<th>Measurement Unit</th>
<th>Pre-measurement</th>
<th>After-measurement</th>
<th>Difference between the two means</th>
<th>Rate of improvement</th>
<th>Calculating of (T) value</th>
<th>Level of significance</th>
</tr>
</thead>
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<td>Achievement motive</td>
<td>Degree</td>
<td>14.6</td>
<td>22.6</td>
<td>7.24</td>
<td>3.7</td>
<td>2.66</td>
<td>Significant</td>
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<td>Motive of success</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>achievement</td>
<td>Degree</td>
<td>1.1</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motive of avoiding</td>
<td>Degree</td>
<td>1.1</td>
<td>1.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the failure</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table value of T is at the significance level (0.05) = 2.05

Table (3) shows that there are differences with statistical significance between the two means of the pre and after measurements of the experimental group in the test of the achievement motive for the interest of the after-measurement, since the value of calculated (T) is higher than the table value at the significance level (0.05).

Osama Rateb (2000) indicates that the sports success depends on the players' usage to their psychological abilities not less than using their physical abilities. Since the psychological abilities help the individuals to mobilize their physical energies and abilities for achieving the best sports performance and they can be developed through special programs and exercises prepared for this purpose such as the program of the psychological skills training. The researcher sees that the previous results emphasize that the success motive will be higher when the player feels optimistic on the contrary to the pessimistic player. On other hand, we will find that the level of fear of failure will be low for the optimistic player and high for the pessimistic.
player, hence, the increase of the achievement motivation will lead to better results. 

Nagla Salama (2010) says that when the achievement motivation is based on the individual's concern to meet the needs of his potentialities and abilities, it will be classified as a motive for the growth. If the attention is focused on the competition between the individuals, it may be classified as social motive. Accordingly, the third hypothesis has been achieved, which indicates that there are differences with statistical significance between the two means of the pre and after measurements of the two groups of the research (the experimental and control groups) in the level of the achievement motive for the interest of the volleyball players who belong to the experimental group.

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