Strategies of Mental Imagery and It’s Relation to Some Psychological Variables In Sport of Wrestling

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Abstract: The aim of this study is to identify the relation between the cognitive and motivation imagery and some psychological variables (a) Achievement motivation (b) Competition anxiety (c) Sport confidence of high level players of wrestling. Researcher used the descriptive methodology due to its relevance and suitability to the objectives of study. Research sample included 18 wrestlers chosen deliberately to represent the national team of wrestling (freestyle Greco-Roman). Researcher used the following tools for imagery in sport: questionnaire (siq) and sport orientation questionnaire (soq) and competitive state anxiety inventory and trait sport confidence inventory. Finally, the researcher can conclude that there is statistical function, extrusive correlation between both of the specific cognitive imagery competitive approach and target approach for the players of high level in wrestling. There is statistical function; extrusive correlation between both of motivation imagery of excitation and competitive approach and win approach of high level players wrestling sport. There is statistical function, extrusive correlation between the general motivation imagery and physical anxiety for the high level wrestling players. There is statistical function, extrusive correlation between the general imagery and self confidence case for the high level players in wrestling sport. There is statistical function, extrusive correlation between specific cognitive imagery and sport confidence feature of high level players in wrestling. There is statistical function, extrusive correlation between the general motivation imagery and sport confidence trait for the high level players in wrestling sport.

Key words: Mental imagery strategies %Motivation achievement %Competition anxiety %Sport confidence trait

INTRODUCTION

Mental training represents one of strategies for sport training technology which attracts the attention of many specialists in this field with its positive and effective role in developing performance level. Both of Shamaon [1] and Allawy [2] refer that mental imagery plays significant role in mental training programs where it represents the core of successful thinking process. So, mental imagery is a reflection of things and appearances that individual has previously realized. Physiological basis of imagery is that processes occurring to some parts of sense organs existing in brain. Imagery is a cognitive function for the organism and a key factor in developing motor skills and improving performance level. Mental imagery is an inclusive process with a compound feature including visual and motor components.

Youssif [3] mentions that imagery skill is one of the main mental capabilities that shapes the basic features of psychological preparation program for players in the field of sport. That is why this ability use many strategies to control and adjust knowledge and motivation aspects in order to improve the performance of sport competition. He also indicates that imagery is a mental skill refers to the mental programming of responses excited by mental activity of sense to form a new mental image evokes the Skill and physical properties of the player temporarily or permanently in order to improve the performance and get the excellence and supremacy. Paivio [4] suggests that imagery serves either cognitive or motivation function and both work in supporting the perceptual and behavioral aspects for the player on the general and particular level where the general cognitive function refers to the use of general cognitive imagery to correct the
general skills and implementing it. While Orliaguet and Coello [5] see that the cognitive function of imagery aims on the specific level-to correct and implement specific sport skills. Hall [6] points to the division of motivation function on the overall level into two dimensions, the first dimension refers to the mastery of general motivation through the player’s imagination of his success in hard situation. This imagery gives player a case of self control and emotional stability. the second dimension refers to the general motivation arousal when the player imagines his ability to control anxiety and adjust excitation preparing for the competition. Hall [7] also refers to the use of specified motivation imagery through merging in training and competition is very effective in order to reach a special sport performance.

Abma et al. [8] and Bochiaro [9] agreed that specified motivation imagery includes setting targets and applying emotions and mental aspects during imagery process, through specific situation like player imagining the public encouraging and promoting him as well as having the feeling of winning the championship. Orliaguet and Coello[5] and Hall [7] indicate that imagery process contributes in increasing the cognitive and motivation functional role which works in improving the concentration and building and practicing new strategies to overcome problems in order to learn and master different motor skills.

Wrestling is considered one of the sports that requires players to be at a high skill, psychological, physical and mental condition. The convergence of many players in the terms of physical and skill level during the training reveals good results. On competition, negative emotions, lack of self confidence and errors resulted from lose of concentration appear on players and also the decline of performance level and the player’s inability to make a proper analysis for the skills needed to be performed either attack or offensive one which require speed, mastery and self confidence in performance. Hence, the researcher thinks there is deficiencies in psychological preparation specially mental training which enables player to imagine the proper skill performance before performing the skill and also make quick analysis of rival’s attack and do a counter attack. Through mental imagery, player can set strategy Prior to the match specially against player never played with him before. As well as player can regain his self confidence after committing a mistake. As player can imagine his ability to achieve his goals and win the competition. From this point came the idea of this study, as an attempt to identify the mental imagery strategies and its relation with some psychological variables (achievement-motivation-competition anxiety and sport confidence) of high level wrestling players where perhaps its results contribute in supporting training process and psychological preparation for the play.

This research aims to identify the relation between the (cognitive and motivation) imagery and some psychological variables:

- **C** Achievement motivation
- **C** Competition anxiety
- **C** Sport confidence of high level players of wrestling

**MATERIALS AND METHODS**

Researcher used the descriptive methodology due to its relevance and suitability to the objectives of study.

Research sample has included 18 wrestlers chosen deliberately to represent the national team of wrestling (freestyle Greco-Roman).

Table 1 shows homogeneity of sample in variables of (age, years of practicing and weight).

Table 1 shows that the torsion coefficient ranges between 0.12 and 1.09 which means that it is confined between ±3, referring to the Homogeneity of the research sample in these variables.

**Research Tools:** Researcher used the following tools and applied it on 10 players from the Egyptian national team of wrestling (freestyle and Greco-Roman) and out of the main sample in order to make a scientific transactions to these following tools:

<table>
<thead>
<tr>
<th>No.</th>
<th>variables</th>
<th>Measurement unit</th>
<th>Mean</th>
<th>SD±</th>
<th>skew</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
<td>Year</td>
<td>24.39</td>
<td>3.24</td>
<td>0.94</td>
</tr>
<tr>
<td>2</td>
<td>Years of practice</td>
<td>Year</td>
<td>12.56</td>
<td>4.22</td>
<td>0.12</td>
</tr>
<tr>
<td>3</td>
<td>Weight</td>
<td>Kg</td>
<td>74.72</td>
<td>17.70</td>
<td>1.09</td>
</tr>
</tbody>
</table>

The questionnaire consists of 30 phrases, every phrase associated with one of the five goals of the imagery functions, the general and specific imagery and motivation imagery specific and excitation and general motivation excitation of motivation imagery.

The researcher has calculated the questionnaire reliability using ALFA Coefficient which ranges between 0.09 and 0.64. Test validity also has been calculated by using the internal consistency of the questionnaire which ranges between 0.0064 and 0.0090 at level 0.05 where "R" is 0.63.

Sport Orientation Questionnaire (soq): It is prepared by Marsh [10] and Allawy [11] translated into Arabic. The questionnaire includes 3 dimensions competitive approach, winning approach and target approach. The researcher has calculated questionnaire reliability using Alfa coefficient where it ranges between 0.73 and 0.66. As well as test validity was calculated by using the internal consistency of the questionnaire where it ranges between 0.64 and 0.99 at 0.05 level where the value of "R" is 0.63.

Competitive State Anxiety Inventory: Martens et al. [12] had designed a list to measure the state/case of sport competitive anxiety. The list includes 3 dimensions related to competition anxiety (cognitive anxiety, physical anxiety and self confidence anxiety) and Allawy [11] translated it into Arabic and the researcher has calculated using Alfa coefficient where it ranges between 0.87 and 0.65. Also, test validity was calculated by using the internal reliability of the inventory where it ranges between 0.97 and 0.64 at 0.05 level where the value of "R" is 0.63.

Trait Sport Confidence Inventory: Vealy [13] had designed the inventory as a trail to measure sport confidence trait and Allawy [11] translated it into Arabic. The researcher has calculated the questionnaire reliability where Alfa coefficient is 0.90. As well as test validity was calculated by using the internal reliability of the inventory where it ranges between 0.94 and 0.64 at 0.05 level where the value of "R" is 0.63.

Application of Research Tools: Research tools have been applied in 2010/2011 on the national team players of (free style, Greco-roman) wrestling in a closed camp in the Olympic center for national teams in preparation to participate in the African Championship starting on 23 to 28 May 2011 in Senegal. Then the researcher has corrected the tests, each according to its key correction, finally, he monitored and scheduled the crude grades and prepared it for a statistical processing.

Statistical Analysis: Researcher has used Mean, Median, Coefficient torsion, Standard deviation and Correlation coefficient.

RESULTS AND DISCUSSION

Table 2 shows a statistical function correlation between Sport imagery and achievement motivation as measured by sport orientation test of high level players in wrestling sport as follows:

- a statistical function, extrusive correlation on 0.05 level between the specific cognitive imagery and both of competitive approach and target approach
- statistical function, extrusive correlation on 0.05 level between motivation imagery of excitation and both of competitive approach and win approach

<table>
<thead>
<tr>
<th>Motivation achievement</th>
<th>Competitive approach</th>
<th>Wining approach</th>
<th>Target approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>specific cognitive imagery</td>
<td>0.671 *</td>
<td>0.321</td>
<td>0.520 *</td>
</tr>
<tr>
<td>General cognitive imagery</td>
<td>-0.027</td>
<td>-0.128</td>
<td>0.043</td>
</tr>
<tr>
<td>specific motivation imagery</td>
<td>0.003</td>
<td>0.163</td>
<td>-0.370</td>
</tr>
<tr>
<td>General motivation imagery of excitation</td>
<td>0.585 *</td>
<td>0.684 *</td>
<td>0.276</td>
</tr>
<tr>
<td>General motivation imagery of excellence</td>
<td>0.165</td>
<td>0.394</td>
<td>0.325</td>
</tr>
</tbody>
</table>

"R" = 0.468 at 0.05

Table 3: Correlation coefficients between sport imagery and competition anxiety of high level players of wrestling, N=18

<table>
<thead>
<tr>
<th>Competition anxiety</th>
<th>Cognitive anxiety</th>
<th>Physical anxiety</th>
<th>Self confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>specific cognitive imagery</td>
<td>-0.373</td>
<td>-0.204</td>
<td>-0.151</td>
</tr>
<tr>
<td>General cognitive imagery</td>
<td>-0.144</td>
<td>-0.261</td>
<td>0.101</td>
</tr>
<tr>
<td>specific motivation imagery</td>
<td>0.016</td>
<td>-0.049</td>
<td>0.168</td>
</tr>
<tr>
<td>General motivation imagery of excitation</td>
<td>-0.177</td>
<td>-0.158</td>
<td>0.188</td>
</tr>
<tr>
<td>General motivation imagery of excellence</td>
<td>-0.348</td>
<td>-0.481 *</td>
<td>0.596 *</td>
</tr>
</tbody>
</table>

"R" = 0.468 at 0.05
Table 4: Correlation coefficients between sport imagery and sport confidence feature, N= 18

<table>
<thead>
<tr>
<th>Imagery</th>
<th>Sport confidence feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific cognitive</td>
<td>0.497 *</td>
</tr>
<tr>
<td>General cognitive</td>
<td>0.340</td>
</tr>
<tr>
<td>Specific motivation</td>
<td>-0.018</td>
</tr>
<tr>
<td>General motivating of excitation</td>
<td>0.111</td>
</tr>
<tr>
<td>General motivation of excel</td>
<td>0.507 *</td>
</tr>
</tbody>
</table>

*R* = 0.468 at 0.05

Table 3 shows the presence of a statistical function correlation between Sport imagery and competition anxiety as measured by sport approach test of high level players in wrestling as follows:

C Inverse correlation statistically significant at 0.05 between general motivation imagery and physical anxiety

C Extrusive correlation statistical significance at 0.05 between general motivation imagery and self-confidence

Table 4 shows the presence of a statistical function correlation at 0.05 between sport imagery and competition anxiety as measured by sport approach test of high level players in wrestling. There is an inverse correlation statistical significant at 0.05 between the specific cognitive imagery and self confidence. There is an inverse correlation statistically significant at 0.05 between the general motive imagery of excel and self-confidence.

Discussion: Results of Table 2 have referred to extrusive correlation statistical significant for the specific cognitive imagery and both competition and target approach as measured by sport approach test of high level players in wrestling.

Researcher has explained that high level players of wrestling are always having the desire to compete and excel and always try to achieve their targets which suite their potentials. The player always focus on his performance through his ability to imagine skills and performing it to the fullest before implementing it, also he can change easily the form of performing the skill, in addition to his ability to correct and control the performance shape of these skills.

Fawzi [14] points that imagination is one of special functional and mental abilities that enable individual to practice specializing sport. This is because every kind of sport practices requires special mental functions qualifying to interact with the variables of its sport situation and solve motor problems that face athlete. Youssif [3] mentions that imagery is a mental skill referring to intellectual programming of responses aroused by a mental activity of senses to form a new intellectual image evokes skill and physical properties of the player permanently or temporarily in with aim of improving performance.

Table 2 indicates extrusive correlation statistical significant correlation between motive imagery of excitement and competition approach and win approach. Researcher explains that high level players of wrestling have the ability to imagine the emotions and deal with it quietly before the match to relieve the tension and control anxiety and excitation that haunt the player, this is due to his serious desire to compete others and win and avoid failure as an attempt to develop his performance and exert the max of his effort. This agrees with what Hall [6] referred to, where he stated that the motive imagery of excitation is that player imagines his ability in controlling anxiety and excitation when to be ready for the competition. Shamaon [15] mentions that mental imagery works in absorbing the negative thinking and giving more support for self confidence and increasing motivation and building patterns of good performance in order to achieve targets. He also noted that negative imagery affects on psychological properties of the player like self confidence and motivation. Orliaguet and Coello [5] and Hall [7] pointed that imagery process contributes in increasing the cognitive and motivation functional role which works in improving concentration and building confidence and practicing new strategies in order to overcome problems, also to learn and master different motor skills

Results of Table 3 refer to a statistical function reversal correlation between the general motivation imagery and physical anxiety. Also, there is a statistical function extrusive correlation between motivation imagery and self confidence as a case of high level wrestling players. The researcher sees that this is because the players have the ability to imagine winning the match and quickly regain concentration and self confidence in the case of committing mistakes during the match specially in situations that require some kind of challenge. They also are able to imagine themselves performing well and keeping control in critical situations during the match. As their ability of good imagery of what is happening before and during the match reduces the psycho-physical disturbances and also reduces tension, nervous and anxiety player that player feels before the match. This makes player more comfortable and calm and relax, as well as increases his self confidence to be Psychologically...
prepared to compete (play the match), thus he will feel that he can overcome the competition pressure and has the ability to face challenge during the match. This enable player achieves his goals. This conclusion agrees with Savoy’s study [16] which says that mental training reduced level of anxiety before the match and improved performance during the match, it also reduces the tension and increases the concentration of the players in order to achieve the best results. This also agrees with the study of Vadoa et al. [17] who pointed to the existence of relation between the general motivations of excel and self confidence as a case.

Table 4 results refer to an extrusive correlation statistical significant between both of the specific cognitive and general motivation imagery and sport confidence feature for the high level players of wrestling. Researcher explains that players of high level in wrestling have the ability to imagine skills and performing it in the best way before implementing it. Through this ability players can change the shape of skill performance easily and also correcting and controlling skill shape during performance. As well as players can imagine winning the match and regain the concentration and self confidence in the case of mistakes during the match specially in situations require some kind of challenge. The ability to imagine performing well and controlling in hard situations, gives player the ability to perform well under pressure in the competition and re-correct mistake after failed attack, as well as adapt to different positions of play with challenging overcome the competitors in order to win the match.

This result comes with the study the study of Callow and Hardy [18] where both noted that players with high sport confidence have the ability to use more strategies of imagery to face challenge situations. There is also a positive correlation between mastery of general motivation and sport confidence. The results of study of Abma et al. [8] and Short and Short [19] indicating that the players who enjoy a high degree of sport confidence, have the ability to use cognitive and motivation functions of mental imagery. This also comes with what Ratib [20] pointed to, where he mentioned that mental imagery can be used in player’s acquisition of the ability to confront and control his emotions, as this helps in the development of building self confidence for the players when he evokes the image performing motor skills in his mind professionally. That supports the positive appreciation of his physical and skill abilities. This positive imagery of player’s skill and physical abilities gives the player self-confidence. Shamaon [21] indicates that mental training contributes in feeling with more self confidence and concentrating in the positive sides which lead to a better anticipation of good performance which in return prevent the negative imagery that harms performance through negative emotions that cause increase of anxiety and failing expectations that reduce the right performance chances.

CONCLUSION

In the light of the sample and the results, the researcher can conclude the following:

C. There is statistical function, extrusive correlation between both of the specific cognitive imagery competitive approach and target approach for the players of high level in wrestling.

C. There is statistical function, extrusive correlation between both of motivation imagery of excitation and competitive approach and win approach of high level players wresting sport.

C. There is statistical function, extrusive correlation between the general motivation imagery and physical anxiety for the high level wrestling players.

C. There is statistical function, extrusive correlation between the general imagery and self confidence feature for the high level players in wrestling sport.

C. There is statistical function, extrusive correlation between specific cognitive imagery and sport confidence feature of high level players in wrestling.

C. There is statistical function, extrusive correlation between the general motivation imagery and sport confidence trait for the high level players in wrestling sport.

Recommendation: In the light of results and its interpretations and the tools used, researcher recommends that:

C. The necessity to take the advantage of developing the ability of mental imagery as an important and effective variable in mental training due to its effectives in supporting some variables closely related to sport achievement of the players in competition.

C. The need to make the use of variables with positive correlation to mental imagery in order to support player’s performance.

C. Players have to be concerned with training program which works in developing mental imagery strategies.
Taking interest of psychological preparation and developing the mental abilities especially of the high level wrestling players

Conducting empirical researches on the functional strategies of mental imagery for its development.

Conducting similar researches on other sports and on different samples to ensure the effectiveness of mental imagery strategies

The necessity for psychologist to help in preparing wrestlers, due to his importance in developing performance level.

REFERENCES


