Relationship between aggression and motor abilities among male inter-school volleyball players

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Abstract
The purpose of the study was to find out the relationship between aggression and motor abilities among male inter-school volleyball players of Government Higher Secondary School Baramulla. For this purpose 20 male volleyball ball players were selected. The findings pertaining to the study resolved the positive relationship aggression with all of the selected motor abilities speed, endurance and strength by using simple linear correlation at 0.05 level of significance.

Keywords: Relationship between aggression, motor abilities, male inter-school, volleyball players

Introduction
Aggression is defined as the desire to inflict harm on another individual, group, or entity. Aggression refers to behavior between members of the same species that is intended to cause humiliation, pain, or harm. Defined aggressive behavior as "Behavior which is intended to increase the social dominance of the organism relative to the dominance position of other organisms". Predatory or defensive behavior between members of different species is not normally considered "aggression." Aggression takes a variety of forms among humans and can be physical, mental, or verbal.

Aggression in sports can be caused by a number of factors. The most identifiable reasons are the rules of the game (level of physical contact), frustration, instinct, presence, arousal, environmental cues, self-control and also the behavior of those around. Other factors in aggression include personality, media involvement, coaching, role models and the society. Vigorous athletic activity can be classified as assertive behavior, instrumental aggression, or hostile aggression. In instrumental aggression, the player tries to inflict physical damage as a step towards the higher goal of winning. In hostile aggression, the player is angry and primarily bent on physically harming an opponent. Although such behaviors have been linked to team success, hostile aggression is particularly controversial. G.Eric Donahue, Rip Blanka, J. Robert Vallerand, (2009) [1], objectives: To examine the interplay between harmonious and obsessive passion and aggressive behavior in sports. It was hypothesized that players who are obsessively-passionate about basketball should report higher levels of aggressive behaviors than harmoniously-passionate players in general, and especially under self threat. Bala Subramanian, Smt. S. Savitri Patil, Dr. P. Rajkumar Malipatil, (2001) [2] the study was carried out to appraise the significant difference of Anxiety behaviour among the sportswomen as it is not conformed. It might be due to their living condition and poverty made them to manage their emotion. Anil Kumar Kadiyan, (2000) [3], conducted a study to find out the level of aggression, anxiety and self-concept between the judokas and wrestlers at Inter-University level. The age of the subject ranged between 20-25 years. The aggression level questionnaire by P.S. Shukla and self-concept was measured by administrating the written test Self Concept on English standardized by Dr. Raj Kumar Sareswat. The Anxiety level questionnaire by Rainwer Martin was given to subjects. Statistically, two way analysis of the data comprised on ANOVA for finding out the aggression level. SCAT for finding out the anxiety level and further F-test was applied to find out the difference in means of Judo and Wrestlers players. Level of significance is at .05. He conducted that - There is significant comparison existed between the Judo and Wrestlers.
Statement of the problem: The statement of the problem is entitled as “Relationship between aggression and motor abilities among male inter-school volleyball players.”

Significance of the problem: The significance of study relates to the importance of psychological component aggression and motor abilities as the primary factors for better performance in sports. This study will be significant for the coaches to enhance the performance of their players.

Objectives of the study
1. To find out the relation between aggression and motor abilities among male inter-school volleyball players.

Delimitations
1. The study was delimited only to the school players from the Government Higher Secondary School Baramulla.
2. The study was delimited only to the age group of 15 to 19 years.
3. The study was delimited only to the male players.

Hypothesis
There will be a positive relationship between aggression and motor abilities among male inter-school volleyball players.

Methodology
As per the requirement of the study all the students are considered as one single group, these subjects are the players of volleyball. The group is comprised of 20 subjects. The average age of the students ranged from 15 to 19 years. For the purpose of the study the selection of subjects was made among the students studying in Government Higher Secondary School Baramulla. The selection of the subjects was made on the basis of Purposive probability sampling Technique.

Selection of variables
Based on literary evidence, discussion with the experts, considering very purpose of the study and the scholar’s own understanding the following variables and their test were selected for this study.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Test</th>
<th>Criterion Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) Motor Abilities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) Strength</td>
<td>Hand Strength</td>
<td>Reading on Dynamometer</td>
</tr>
<tr>
<td>ii) Speed</td>
<td>50 m dash.</td>
<td>Second</td>
</tr>
<tr>
<td>iii) Endurance</td>
<td>Harvard Step Test</td>
<td>Minutes</td>
</tr>
<tr>
<td>B) Psychological Parameters:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aggression</td>
<td>Dr.(Mrs) G.P.Mathur &amp; Dr.(Mrs) Raj Lumari Scale</td>
<td>Scoring</td>
</tr>
</tbody>
</table>

Tools
All the instruments going to be used in this research will be quite precise and reliable. For speed test the researcher is going to use the 50m dash. For endurance test the researcher is going to use Harvard step test, for this the instruments to be used are metronome, stopwatch and 20 inches stool. For hand strength the researcher will use the hand dynamometer. For administering psychological Tests the researcher is going to use the following tools. For aggression the questioner of Dr. G.P. Mathur and Dr. Rajlumari Bhatnagar is employed.

Procedure for administering the Test/Questionnaire
1. The research scholar had made sincere attempt to collect data from the subjects authentically. Therefore, he had tried his best to motivate the subjects to get their sincere and all out response for the successful completion of the study. Also they were asked to put up their best performance as the findings will also help them to know about their performance.

All the subjects were assembled on their respective places i.e. in the psychological laboratory and in the Track and Field arena Government Higher Secondary School Baramulla. They were informed with the requirements of the study and the testing procedure. The researcher administered the motor ability test for volleyball player which includes Harvard step test, hand grip test and 50 m dash and to administer psychological questionnaire of aggression developed by Dr. G.P. Mathur and Dr. Rajlumari Bhatnagar respectively have been used.

A) Psychological Parameters
Aggression
The features Aggression Scale developed by Dr. G.P. Mathur and Dr. Rajlumari Bhatnagar Aggression scale is used to study the level of aggression in any group (above 14 years). It consists of 55 statements. Each statement describes different forms of individual’s aggression in different situations. It is a liker type 5 point scale. In this scale statements are in two forms i.e positive and negative. It’s reliability and validity is .88 and .80 respectively in male.

Scoring
It is a 5 point scale, in this scale statements are in two forms i.e positive and negative. 30 statements are in positive form and 25 are in negative form. In positive form of statements scores will be given as 5, 4, 3, 2, 1 for Strongly Accepted, Accepted, Undecided, Disagree, Strongly Disagree respectively. In negative form of statements scores will be given as 1, 2, 3, 4, 5 for Strongly Accepted, Accepted, Undecided, Disagree, Strongly Disagree respectively. In this scale Positive item number is 1, 2, 3, 5, 7, 8, 10, 12, 14, 16, 19, 22, 23, 25, 28, 29, 32, 34, 36, 38, 42, 43, 48, 49, 51, 52, 53, 54, 55 and negative items are 4, 6, 9, 11, 13, 15, 17, 18, 20, 21, 24, 26, 27, 30, 31, 33, 35, 37, 40, 41, 44, 45, 46, 47, 50. The total number of answers constitute the final score. Maximum score is 275 and minimum score is 55. Score below 154 indicates low aggression, Scores between 155 to 204 indicates Average Aggression and score above 204 indicates High Aggression.

B) Motor Abilities
i) Endurance: Harvard Step Test for endurance by Brouha in the Harvard Fatigue Laboratories during WWII.

Equipment required: step or platform 20 inches/50.8 cm high, stopwatch, metronome or tape recorder.

Test Administration: The athlete steps up and down on the platform at a rate of 30 steps per minute (every two seconds).
for 5 minutes or until exhaustion. Exhaustion is defined as when the athlete cannot maintain the stepping rate for 15 seconds. The athlete immediately sits down on completion of the test, after finishing the total number of heart beats are counted between 1 to 1.5 minutes, between 2 to 2.5 minutes, and between 3 to 3.5 minutes.

**Scoring:** The Fitness Index score is determined by the following equations. For example, if the total test time was 300 seconds (if completed the whole 5 minutes), and the number of heart beats between 1-1.5 minutes was 90, between 2-2.5 it was 80 and between 3-3.5 it was 70, then the long form Fitness Index score would be: (100 x 300) / (240 x 2) = 62.5. Note: you are using the total number of heart beats in the 30 second period, not the rate (beats per minute) during that time.

Fitness Index (long form) = \( (100 \times \text{test duration in seconds}) / (2 \times \sum \text{heart beats in the recovery periods}) \)

Correlation to \( \text{VO}_{2\text{max}} \) has been reported as between 0.6 to 0.8 in numerous studies.

However, in case the subject is unable to do the step exercise for full five minutes, Brouha had recommended direct scoring schemes given below, which were irrespective of the after exercise pulse counts:

**Table 2:** Scoring of Harvard Step Test

<table>
<thead>
<tr>
<th>Duration of Exercise (at correct pace)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 2 minutes</td>
<td>25</td>
</tr>
<tr>
<td>From 2.00 to 3.00 minutes</td>
<td>38</td>
</tr>
<tr>
<td>From 3.01 to 3.50 minutes</td>
<td>48</td>
</tr>
<tr>
<td>From 3.51 to 4.00 minutes</td>
<td>52</td>
</tr>
<tr>
<td>From 4.01 to 4.50 minutes</td>
<td>55</td>
</tr>
<tr>
<td>More than 4.50 minutes</td>
<td>59</td>
</tr>
</tbody>
</table>

After scoring, the subjects were evaluated with the help of the following standards:

**Table 3:** Evaluation of Harvard Step Test

<table>
<thead>
<tr>
<th>Rating</th>
<th>Fitness Index (long form)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>&gt; 90</td>
</tr>
<tr>
<td>Good</td>
<td>80 – 89</td>
</tr>
<tr>
<td>High average</td>
<td>65 – 79</td>
</tr>
<tr>
<td>Low average</td>
<td>55 – 64</td>
</tr>
<tr>
<td>Poor</td>
<td>&lt; 55</td>
</tr>
</tbody>
</table>

**ii) Speed**

**Speed Test (50 m dash):** The purpose of the test is to measure speed.

**Equipments:** Area of desired length preferably on an athletic track, with a marked starting line and a finish line, two stopwatch and clapper (optional).

**Test Administration:** The tester should give in advance, instructions to a group of 20 subjects as follows "you are required to take any position behind the starting line. Wait for the signal. On receiving the command Go! You have to start running as fast as possible till you reach the finish line. You have to gradually slow down only after crossing the finish line. Warm up just before the sprint test.

**Scoring:** The time elapsed from the start to the instant, subject crosses the finish line is the score expressed usually up to hundredth of a second.

**iii) Hand Grip Dynamometer (kg)**

**Purpose:** To measure the strength of hand grip.

**Equipment:** Hand Dynamometer

**Recorded:** The hand strength is measured in kilograms

**Procedure:** The measurement was performed twice from both hands and the mean value of highest values of the both hands is indicated by flashing results. First of all the power supply is turned on and measurement is started with right hand. The subjects were asked to sit on the chair with straight back and the arms slightly bend at elbow. Then subject was asked to grip the equipment and squeeze it with peak power but subject cannot press it twice. The digital meter describes the score which is recorded.

**Statistical Technique**

In order to find out the relationship between selected psychological variables and motor abilities of the volley ball players, simple linear correlation was used at 0.05 level of significance.

**Analysis of data, interpretation and results of study**

The data was analyzed by the simple linear co-relation. The level of significance was fixed at 0.05 level. The analysis of data for the relationship between psychological parameter aggression and motor abilities(strength, endurance and speed) were taken from volley ball players from Government Higher Secondary School Baramulla, total 20 male players were taken for the study and then co-relation was find out.

**Findings**

**Relationship of aggression with Motor Abilities among Male volley ball players**

**Table 4**

<table>
<thead>
<tr>
<th>Variables Co-related</th>
<th>Psychological Variables</th>
<th>Motor Abilities</th>
<th>( r^2 ) value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggression</td>
<td>Endurance</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Strength</td>
<td>0.19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Speed</td>
<td>0.15</td>
<td></td>
</tr>
</tbody>
</table>

N= 20
\( r^2 = 0.05 \) (18)= .444

An examination of Table- 4.1 clearly reveals that the value of \( r^2 \) in case of Aggression- Endurance (\( r^2 = 0.08 \)), Aggression-Strength (\( r^2 = 0.19 \)), Aggression-Speed (\( r^2 = 0.15 \)) showed insignificant but positive relationship and the value of \( r^2 \) is close to 0 that means there is a relationship, if a parameter increases other will increase simultaneously.

**Fig 1:** illustrates the relationship of aggression with endurance, strength and speed.
The values shown in figure 4.1 are above the 0.05 level which clearly indicates the positive relationship of aggression with endurance, strength and speed.

References
5. www.google.com