

Comparative analysis of aggression as a function of age and levels of sports participation

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Abstract

Sports is a psycho-social activity. It has both psychological and social dimensions, besides, physical, physiological and technical aspects. The main objective of sports is to develop physical mental health and to integrate or to bring about psycho-social aspects to promote national and international, social and cultural integration and peace. The purpose of the study was to make a comparative analyze of aggression as a function of age and levels of sports participation as a function of age group 18 -19, 20 to 22 and 23 to 25 years and levels of participation District, State and National. Statistical techniques used to analyze the level of Aggression of sportswomen of different levels and different age groups in this study are: 3 x 3 factorial design, Scheffe's post hoc test for factor A and B. It was concluded that there was no significant difference among sports women of different levels and of different age groups on Aggression as a function of age and levels of participation.

Keywords: sports, athletes, aggression

Introduction

Sports

Sport is an activity that is governed by a set of rules or customs and often engaged in competitively. Sports commonly refer to activities where the physical capabilities of the competitor are the sole or primary determinant of the outcome (winning or losing), but the term is also used to include activities such as mind sports (a common name for some card games and board games with little to no element of chance) and motor sports where mental acuity or equipment quality are major factors. Sport is commonly defined as an organized, competitive and skilful physical activity requiring commitment and fair play.

Psychology of Sports

Psychology of sports is an application of psychology in the field of sports and games. In other words, it is the psychological approach to sports and games, in order to make them efficient, fruitful and interesting. (Mohan et.al. 1986) Psychology of sports is a branch of psychology that examines various aspects of activities and physical culture. It also studies the psychological aspects of athlete's personality.

Aggression

The word aggression comes from the Latin word "agreed" (to or toward) and "gaudier" (Walk) literally the world means to walk toward or approach, "to move against" or "to move with intent to hurt or harm". Aggression is a behaviour and it always refers to an act that is committed with the intent to inflict injury. Aggression is behaviour and actions that usually seek to inflict psychological and physical harm, on another person or on individuals' possessions or dear ones. (2001).

Objectives of the Study

1. To analyze the Aggression level of the district, state and national level players.

2. To analyze the Aggression level in three distinct different age groups of 18 to 19, 20 to 22 and 23 to 25 years.
3. To make a comparative analysis of the Aggression level among the independent groups selected for this study.
4. To find out the differences in Aggression level among different levels of sports women.

Statement of the Problem

The purpose of the study was to make a comparative analysis of Aggression as a function of Age and levels of participation.

Hypotheses

It was hypothesized that, There would not be any significant differences in aggression among sportswomen of district, state and national players in age groups of 18 to 19, 20 to 22 and 23 to 25 years.

Review of Related Literature

Reynes and Lorant (2004) conducted a study on Competitive martial arts and aggressiveness: a 2-yr. longitudinal study among young boys. This study is a follow-up study of Reynes and Lorant's studies assessing the effect of one year of judo and karate training on aggressiveness scores among young boys. The data reported here were obtained after a second year of practice, 14 judoka, 9 karateka, and 20 control participants who filled out the Buss-Perry Aggression Questionnaire three times, 1 year apart. At the first assessment, all participants, born the same year, were 8 yr. old and at the third they were 10 yr. old. Analysis indicated that after two years of practice, karate training seemed to have neither positive nor negative effects on aggressiveness scores, while judo training seemed to have a negative effect on anger scores. However, the results suggested the importance of kata or meditation in training sessions on self-control acquisition for such young boys. Perry *et al.* (2003) conducted a study on Measures of aggression and mood changes in male weightlifters with and

without androgenic anabolic steroid use. Supra physiologic doses of testosterone are associated with increased aggression that is hypothesized to be a function of testosterone serum concentrations, mood, and personality. The study attempted to characterize this relationship among weightlifters who were users (n = 10) and nonusers (n = 18) of anabolic steroids. Participants were interviewed using the Modified Mania Rating Scale and Hamilton Rating Scale for Depression to assess mood, the Buss-Durkee Hostility Inventory (BDHI) and Point Subtraction Aggression Paradigm (PSAP) to assess aggression, and the Personality Disorder Questionnaire (PDQ-R) to assess personality. Blood samples were obtained for the determination of total, free, and weakly bound testosterone. Comparisons of continuous variables between testosterone users and non-users were performed with a parametric (unpaired t-test) or non-parametric (Mann-Whitney) test where appropriate. Correlations with testosterone were examined separately for testosterone users and non-users, using Spearman rank correlation. The subjective (BDHI) and objective (PSAP) assessments of aggression found that supernormal testosterone concentrations were associated with increased aggression. However, the PDQ-R results suggest that this finding was confounded by the personality disorder profile of the steroid users, because steroid users demonstrated Cluster B personality disorder traits for antisocial, borderline, and histrionic personality disorder.

Selection of Subjects

To facilitate the study sixty district level sports women -20 in the age group of 18 -19, 20 in the age group of 20 to 22 and 20 in the age group of 23 to 25 years. Similarly sixty state level sports women and sixty national level sports women were selected for this study.

Research Design

Independent randomized research design was used for this study, as the subjects were selected randomly from 3 x 3 independent groups. The objective of undertaking this research was to assess the Aggression level as a function of age and levels of participation to find out the differences among the selected sportswomen. The responses obtained through standardized questionnaire to measure all the groups on Aggression level was collected. Since the research is aimed at determining different levels of players (3 levels) and different age groups (3 groups) 3 x 3 Factorial design was followed for this study.

Collection of data

The collected Aggression questionnaire from the selected subjects was scored based on the scoring system of the questionnaire as the questionnaires administered were through standard questionnaire. The subjects were explained about the meaning and use of questionnaire and test know she has to be done exactly. Data were collected for this study directly from among the sportswomen of different levels of different age.

Statistical Techniques

In this study the following statistical techniques were used to analyze the Aggression level of sportswomen of different levels and different age groups.

1. 3 x 3 factorial design.
2. Schaffer’ss post hoc test for factor A and B.

Results and Discussions

Computation Of 3 X 3 Factorial Analysis of Variance

The results on comparative analysis of aggression level as a function of age, analysed with reference to three age groups and levels, analysed of the levels, district, state and national participation. As statistically analysed through 3 x 3 factorial analysis of variance was presented in Table 1 and 2.

Table 1: Descriptive Statistics Containing Mean, Standard Deviation on Aggression among Women Players of Different Age groups of Different Levels

Levels	Age Groups	M	SD	N
District	18 – 19 Years	168.30	18.582	20
	20 – 22 Years	166.95	18.378	20
	23 – 25 Years	173.10	23.828	20
	Average	169.45	20.245	60
State	18 – 19 Years	164.70	11.965	20
	20 – 22 Years	171.95	10.660	20
	23 – 25 Years	167.30	10.110	20
	Average	167.98	11.170	60
National	18 – 19 Years	166.05	8.217	20
	20 – 22 Years	171.75	10.452	20
	23 – 25 Years	170.40	19.140	20
	Average	169.40	13.451	60
Total	18 – 19 Years	166.35	13.464	60
	20 – 22 Years	170.22	13.637	60
	23 – 25 Years	170.27	18.424	60
	Average	168.94	15.373	180

Table 1 shows the obtained mean values on aggression. As shown in the table the District level women players in the age group of 18 to 19 years aggression mean value was 168.30 with standard deviation ± 18.582, 20-22 year group aggression was 166.95 with standard deviation ± 18.378, 23 – 25 year age group aggression was 173.10 with standard deviation ± 23.828. Thus, taking into consideration all the three age groups of women players at district level was 169.45 with standard deviation ± 20.245.

Table 1 shows the obtained mean values on psychosociological variable, aggression. As shown in the table the State level women players in the age group of 18 to 19 years aggression mean value was 164.70 with standard deviation ± 11.965, 20-22 year group aggression was 171.95 with standard deviation ± 10.660 23 – 25 year age group aggression was 167.30 with standard deviation ± 10.110. Thus, taking into consideration all the three age groups of women players at state level was 167.98 with standard deviation ± 11.170.

Table 1 shows the obtained mean values on psychosociological variable, aggression. As shown in the table the National level women players in the age group of 18 to 19 years aggression mean value was 166.05 with standard deviation ± 8.217, 20-22 year group aggression was 171.75 with standard deviation ± 10.452, 23 – 25 year age group aggression was 170.40 with standard deviation ± 19.140. Thus, taking into consideration all the three age groups of women players at national level was 169.40 with standard deviation ± 13.451.

Thus, the results in table 1 proved that there existed mean differences among different age groups of different levels of players. The mean values on aggression of the women players of different age groups are shown in Figure 1.

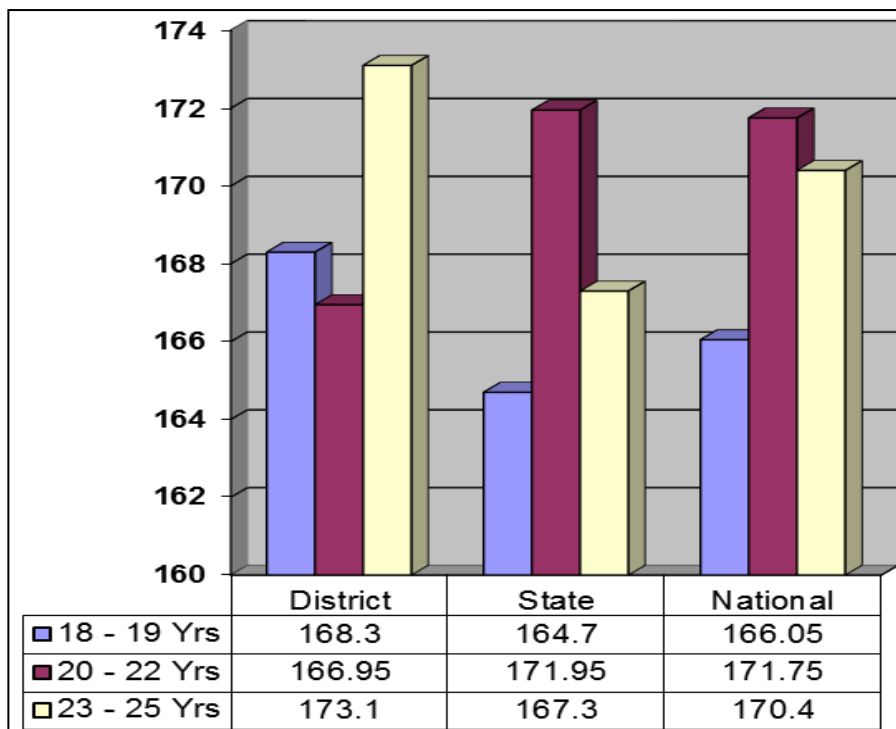


Fig 1: Mean Values of Different Age groups of Women Players of District, State and National levels in Aggression

To test the significance in differences, the investigator subjected the data collected by using 3 x 3 factorial (design)

analysis of variance and the obtained results on aggression were presented in table 2

Table 2: 3 x 3 factorial analysis of variance for aggression of women players of different age groups

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Model	5138996.2	9	570999.58	2386.970	0.000
Factor A	83.211	2	41.606	0.174	0.841
Factor B	605.878	2	302.939	1.266	0.284
Factor A * B	706.556	4	176.639	0.738	0.567
Error	40905.800	171	239.215		
Total	5179902.0	180			

Table values df (2,168) (0.05) = 3.07, df (3,168) (0.5) = 2.68, df (6,168) = 2.18

*Significant at 0.05 level of confidence.

(Scores in numbers)

Table 2 shows the analyzed data on aggression Factor 'A' shows three levels of players, namely, district, state and national level players. Factor 'B' shows three groups of age of players, namely, 18 – 19 years, 20 – 22 years and 23 to 25 years. Factor A * B shows the inter action effect between 3 levels of players and 3 age groups.

The obtained 'F' ratio of extroversion / introversion for factor 'A' was 0.174 and table 'F' ratio was 3.07. As the obtained 'F' ratio was less than the table 'F' ratio, the study was significant at 0.05 level of confidence for the degrees of freedom 2 and 168 As the factor 'A' was insignificant, the post hoc test was not followed as stated by Rothstein (1985).

The obtained 'F' for factor 'B' was 1.266 and the required table 'F' ratio was 2.68. As the obtained 'F' ratio was less than the table 'F' ratio, the study was insignificant at 0.05 level of confidence for the degree of freedom 3 and 168, the factor 'B' was insignificant; As the factor 'B' was insignificant, the post hoc test was not followed as stated by Rothstein (1985).

The obtained 'F' ratio (Table) for the factor 'A' and 'B' was 0.567 and the table 'F' ratio was 2.18. As the obtained 'F' ratio was less than the required table value, the study was

insignificant at 0.05 level of confidence for the degrees of freedom 6 and 168. As the obtained 'F' ratio was less than the table 'F' ratio, simple effect test was not applied to find out the overall cell means significant difference as stated by Clarke and Clarke (1972).

Conclusions

It was concluded that there was no significant difference among sports women of different levels, namely, district, state and national levels (Factor A, P=0.841) and of different age groups, namely, 18 to 19, 20 to 22 and 23 to 25 years (Factor B, P=0.284) on aggression and it was concluded that psychological function, aggression as a function of age and levels of participation (interaction effects) was not significant (P=0.567).

Recommendations

The findings of this study proved that there was difference among different levels of players of different age groups on Aggression level as a function of age and levels of participations. Since significant differences were recorded on

Aggression level among the women players, it was recommended that when selecting players, the findings of this study may be taken into consideration by the Physical Education teachers, Sports Managers and Coaches to select the players.

Efforts may be taken to give coaching facilities with psychological preparations right from district level players and at their early age of participation so that the players could achieve better right from district level competitions.

References

1. Ayajit Singh. Sports Psychology, Delhi: Friends Publications. 1996, 16.
2. Jitendra Mohan, *et al.* Psychology of Sports, New Delhi: Friends Publication. 1986, 67.
3. Kamlesh ML. Psychology of Physical Education and Sports, New Delhi: Metropolitan Book Company, Pvt Ltd. 1983, 38.
4. Lane AM, Terry PC. The nature of mood: Development of a conceptual model with a focus on depression". *Journal of Applied Sport Psychology*. 2000; 12:16-33
5. Larun L, *et al.* Exercise in prevention And Treatment of Anxiety and Depression among Children and Young People", *Cochrane Database Syst Rev*. 2006; 19:3.