



Comparative Study of Selected Physical Fitness and Psychological Variables of Individual Game Players and Team Game Players

* Dr. Ashok Kumar Malik

Associate Professor

Ch.Devi Lal University, Sirsa

** Dr. Avtar Singh

PGT Physical Education ,

Aarohi Model Sen.Sec. School, Jhiri,Sirsa

Abstract

The purpose of the study was to find out and compare the agility, strength, anxiety and adjustment of individual game players and team game players. For the collection of data 160 players (80 individual game players and 80 team game players) were selected from the inter collage tournament. All these selected subjects secured first, second and third position in the tournaments. These players were in the age group of 19-25 years. The questionnaires /physical fitness test on zig-zag run –The investigator used zig-zag run to measure agility developed by Michael P. Reinman, PT, and Robert C. Manske, PT to check the outcome of the athlete's speed and agility. Medicine Ball Throw: The investigator used to measure strength of the players developed by Aquilino Cosani (1963). Sinha's Comprehensive Anxiety Test by A.K.P Sinha, L.N.K. Sinha Hindi Version (2011), Adjustment Inventory for College Students by A.K.P. Sinha and R.P. Singh, Hindi Version (2012). were administered. After collecting the data mean, standard deviation and t-test were tested. On the basis of the study it is proved that there exist no significance difference in the agility of individual game players and team games players. There exist a significance difference in the strength of individual game players and team games players. The team game players were founded more strength than the individual game players. However, there is no significance difference between individual game players and team game players on anxiety. In case of adjustment, there is no significant difference between individual game players and team game players on health adjustment, emotional adjustment, educational adjustment.

Keywords: Agility ,Strength, Anxiety and Adjustment .

Introduction

The fitness notion occupies an extended and complex history. In literature it is explored in work done by Charles Darwin on the survival of fitness. The expression of fitness suggests the ability of an animal or a human to work and play with paramount level of physical efficiency and to be trained to meet unpredicted

danger or damage. It entails short duration of time having full capacity to do prolong hard work and absolute recovery of health. This is the result of the degree of strength, speed, endurance, agility, power and flexibility one possesses. These elements of physical fitness are useful for different games and sports.

In sports dominating countries rapid progress in the sphere of sports and games has been noticed due to their scientific approach in training and equipment, experiments and application of scientific knowledge as well as research findings in the area of sports. It is also aptly expressed in an old saying, exercise may not necessarily add years to your life, but will add up life to your years which is indeed a truth.

Physical fitness refers to the ability of your body systems to work together efficiently to allow you to be healthy and perform activities of daily living...A fit person is able to perform schoolwork, meet home responsibilities, and still have enough energy to enjoy sport and other leisure activities (Charles B. Corbin & Guy Le Masurier).

According to the United States Department of Health and Human Services, physical fitness is defined as "a set of attributes that people have or achieve that relates to the ability to perform physical activity." (*www.medicalnewstoday.com, assessed date 31/01/2020*)

Agility is the ability to move and change direction and position of the body quickly and effectively while under control. It requires quick reflexes, coordination, balance, speed, and correct response to the changing situation. It is the ability to think and draw conclusions quickly.

Physical strength is achieved through muscle development. Muscle strength and increase in muscle size are acquired by muscles working against a resistant force which is gradually increased as the muscles become stronger. A strength conditioning program usually consists of progressively resistive weight exercises.

Anxiety is also one of the important psychological factor influencing sports performance. It is a complex emotional state characterized by general fear or forbidding usually accomplished by tension. Anxiety experiences may include sweating, increased heart rate, heightened blood pressure, rapid and shallow breathing, nausea, chest pain, frequent urination, choking sensation, dizziness, hot and cold flashes, faintness and trembling or shakiness.

Adjustment is a relationship that is established between the person and the environment. Every person plays some position in their social relationships. They are trained to play their role that their maximum needs will be met. Therefore, he should play his role properly and get maximum satisfaction.

Types of Adjustment:-

Health Adjustment: As explained by World Health Organization (WHO), it is a "State of complete physical, mental, and social wellbeing, and not merely the absence of disease or infirmity." Health an effective condition arising from a body's regular adjustment and assimilation in result to force and alterations in the environment for keeping an inner balance called homeostasis.

Emotional Adjustment: Emotional adjustment meant how much an athlete thinks about any other person nearby him and how much respect gives to his emotions. His performance level depends on his emotion. Emotion is related to psychology adjustment. It is desirable to psychological adjustment. On the contrary, people who are overly emotional and impulsive may hurt out their feeling without much thought they need to develop better control on it.

Educational Adjustment: The school also needs to educate regarding the needs of special children. This helps then to accept such children in the classroom and also to develop more positive attitude towards them. Deyle describes how the attempts of one single teacher can change the entire social climate of the school. This article describes how to establish a mature group in a challenging infant school. It has a profound effect on the progress of the school as a whole.

Individual Game: A game played by only one player.

Team Game: A team game involves any sort of game which includes two or more than two players, playing together leading to a shared goal.

OBJECTIVES

Following are the main objectives of the present study:-

1. To compare the agility of the players of individual game and team game.
2. To compare the strength of the players of individual game and team game.
3. To compare the anxiety of the players of individual game and team game.
4. To compare the health adjustment of the players of individual game and team game.
5. To compare the emotional adjustment of the players of individual game and team game.
6. To compare the educational adjustment of the players of individual game and team game.

HYPOTHESES

1. There is no prominent contrast between the agility of the players of individual game and team game.
2. There is no prominent contrast between the strength of the players of individual game and team game.
3. There is no prominent contrast between the anxiety of the players of individual game and team game.
4. There is no prominent contrast between health adjustment of the players of individual game and team game.
5. There is no prominent contrast between emotional adjustment of the players of individual game and team game.
6. There is no prominent contrast between educational adjustment of the players of individual game and team game.

DELIMITATIONS

The research was held in Haryana state only.

1. Only 160 male players were considered for the current research out of which 80 from players of individual games and 80 from players of team games.
2. The analysis was bound to only 1st, 2nd and 3rd position holder in inter- colleges level competition of Haryana state universities.
3. The samples were taken from K.U.K,CBLU,Bhiwani,M.D.U, Rohtak and C.D.L.U, Sirsa of Haryana state only.
4. The research was bound to only male players of age group 19-25 years.
5. The research was set to individual sports of three games i.e. Archery, Wrestling and Boxing only.
6. The analysis was bound to team sports of three games i.e. Handball, Basketball and Volleyball only.
7. The research was bound to only two physical fitness factors i.e. Agility and Strength.
8. The research was bound to only two Psychological variables i.e. Anxiety, and Adjustment.

Method and Procedure:

Design of the study: Survey and observation methods were used for the present study.

SAMPLE

According to the criteria of the current research, the investigator selected total 160 male players (80 male players for individual game); (80 male players for team game) of age range 19 to 25 years from Kurukshetra University Kurukshetra,Ch. Bansi Lal University, Bhiwani, Maharishi Dayanand University, Rohtak and Chaudhay Devi Lal University, Sirsa of Haryana state.

TOOL USED :

For the collection of the data required for the study the investigator used the following

tools:-

Physical Fitness Test

- i. Zig-Zag Run: To measure Agility
- ii. Medicine Ball throw: To Measure Strength

(i) Zig-Zag Run: The investigator used Zig-Zag Run to measure agility developed by Michael P. Reinman, PT, and Robert C. Manske, PT to check the outcome of the athlete's speed and agility.

(ii) Medicine Ball Throw: The investigator used to measure strength of the players developed by Aquilino Cosani (1963).

Psychological Test

The following Psychological Test used for the current research.

(i)Sinha's Comprehensive Anxiety Test by A.K.P Sinha, L.N.K. Sinha Hindi Version(2011)

(ii)Adjustment Inventory for College Students by A.K.P. Sihna and R.P. Singh,Hindi

Version (2012).

Statistical Technique Used: - The mean score, standard deviation and t-test were used.

Results and Discussion:

The present chapter analyzes the physical fitness components and psychological variables of sports person. The score related to Physical Fitness components and Psychological variables collected through various tests on 80 individual game players and 80 team game players of age group of 19-25 years. Further, collected data analyzed with the help of mean and standard deviations. Also application of t-test used to studied the formulated hypotheses.

Table No. 1

Comparison of the zig-zag runs to measured agility of individual game players and team game players

Groups	N	Mean	S.D	SED	t-ratio	Level of Significance
Individual game players	80	6.98	0.61	0.07	1.71	Not Significance
Team game players	80	6.86	0.29			

Not Significance difference at any levels

The results of the comparison of the zig- zag runs to measured agility of individual game players and team game players shows into the Table 1. The mean value in case of agility of individual game players is 6.98 and SD is 0.61 and agility of team game players is 6.86 with SD is 0.29. On the basis of the mean values, agility of the individual game players is slightly lower than the team game players with SED is 0.07. The value of t-test depicts that there is no significant difference found into the individual game players and team game players. So, the hypothesis is accepted.

Fig. no 1

Graphical analyses of the zig-zag runs to measured agility of individual game players and team game players

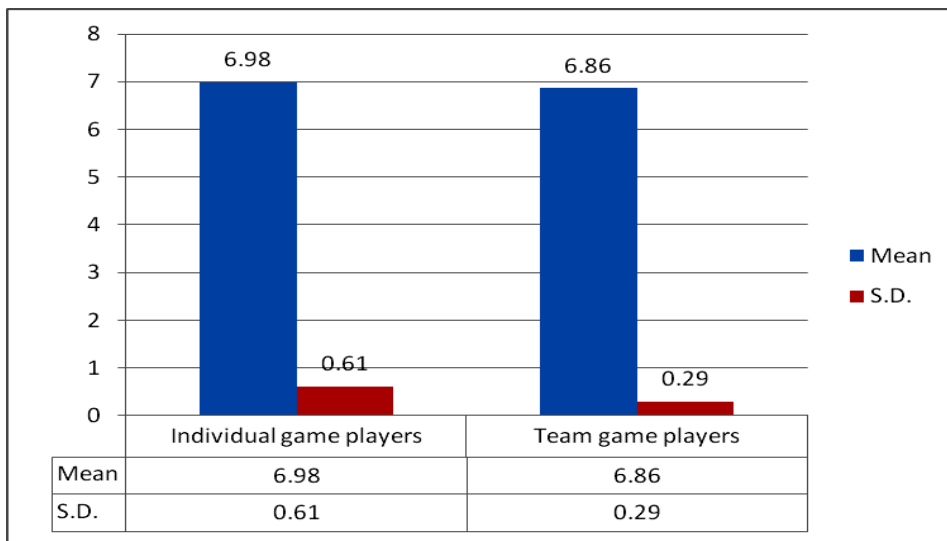


Table No.2

Comparison of the medicine ball throw to measure strength of individual game players and team game players

Groups	N	Mean	S.D	SED	t-ratio	Level of Significance
Individual game players	80	10.91	1.62	0.27	2.18	Significance
Team game players	80	11.50	1.82			

Significance difference at 0.05 levels

Table no 2 highlighted comparison of the mean value and SD of the individual game players and team game players with regards to strength. The mean value of the medicine ball throws of individual game players is 10.91 with SD is 1.62 lower than the mean value in comparison to team game players which is 11.50 with SD is 1.82. On the basis of comparison of mean value, the strength of the team game players is higher than the individual game players. However, the value of t-test is 2.18 depicts that there is significant difference between the individual game players and team game players at 0.05 level of significance. So, the hypothesis is rejected.

Fig. No 2

Graphical analyses of the Medicine Ball Throw to Measure Strength of Individual Game Players and Team Game players

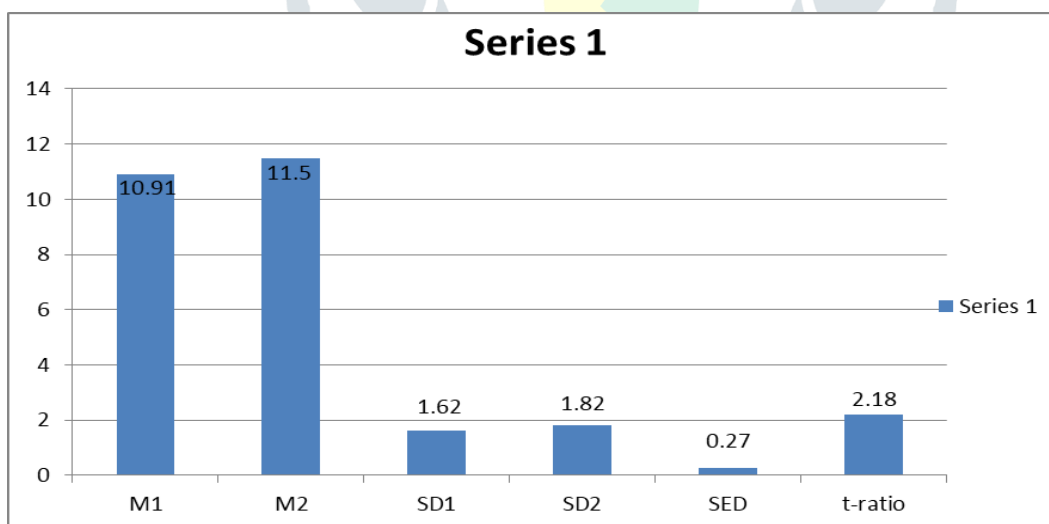


Table No.3

Comparison of anxiety level of individual game players and team game players

Groups	N	Mean	S.D	SED	t-ratio	Level of Significance
Individual game players	80	25.26	7.87	1.11	1.31	Not Significance
Team game players	80	23.88	6.11			

No Significance difference at any levels.

The results of the comparative analysis of the anxiety level between individual game players and team game players highlighted into the Table 3. The mean value in case of anxiety of individual game players is 25.26 and SD is 7.87 and mean value of anxiety level of team game players is 23.88 with SD is 6.11. On the basis of the mean values, anxiety of the individual mean players is higher than the team game players with SED is 1.11. The value of t-test depicts that there is no significant difference found between anxiety level of the individual game players and team game players. So, the hypothesis is accepted.

Fig. No 3

Graphical analyses of the anxiety level of individual game players and team game players

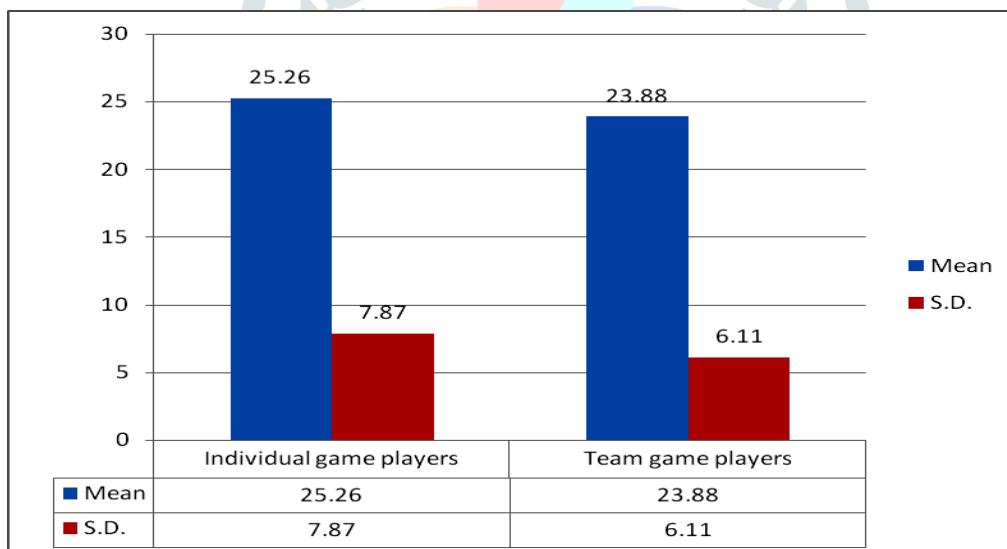


Table No. 4

Comparison of health adjustment level of individual game players and team game players

Groups	N	Mean	S.D	SED	t-ratio	Level of Significance
Individual game players	80	4.96	1.91	0.30	0.8	Not Significance
Team game players	80	4.72	2.12			

Not Significance difference at any levels

Results of the comparative analysis of the health adjustment of individual game players with team game players depicts into the Table 4. In the case of individual game players, mean value of 80 players score of health adjustment is 4.96 with SD is

1.91. As well as mean value of health adjustment of team game players is 4.72 and SD is 2.12. The mean value of the individual game players is higher than the team game players with SED is 0.30 depicts that individual game players slightly more health adjustment in comparison to team game players. Further, the application of the t-test shows that there is no significant difference between the health adjustment level of individual game players and team game players at any significant levels. So, the hypothesis is accepted.

Fig. No 4

Graphical analyses of health adjustment level of individual game players and team game players

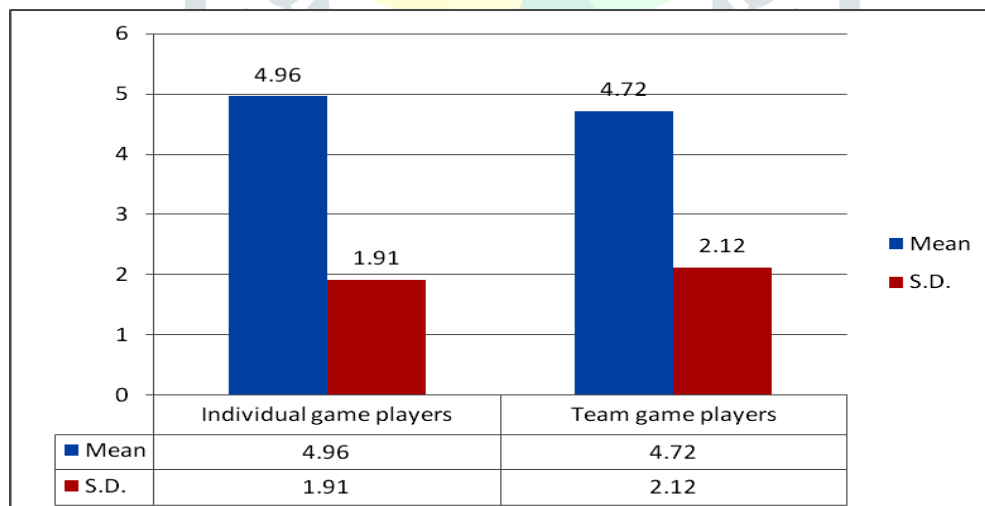


Table No. 5

Comparison of emotional adjustment level of individual game players and team game players

Groups	N	Mean	S.D	SED	t-ratio	Level of Significance
Individual game players	80	9.11	3.30	0.56	0.87	Not Significance
Team game players	80	9.60	3.94			

No Significance difference at any levels.

The comparative results of emotional adjustment of individual game players with team game players mentioned into Table 5. The mean value of score of emotional adjustment of individual game players is 9.11 and SD is 3.30 and mean value of scores of team game players is 9.60 with SD is 3.94. On the basis of the mean values, emotional adjustment of the individual game players is slightly lower in comparison to the team game players with SED is 0.87. The value of t-test depicts that there is no significant difference found into the individual game players and team game players. So, the hypothesis is accepted.

Fig. No 5

Graphical analyses of emotional adjustment level of individual game players and team game players

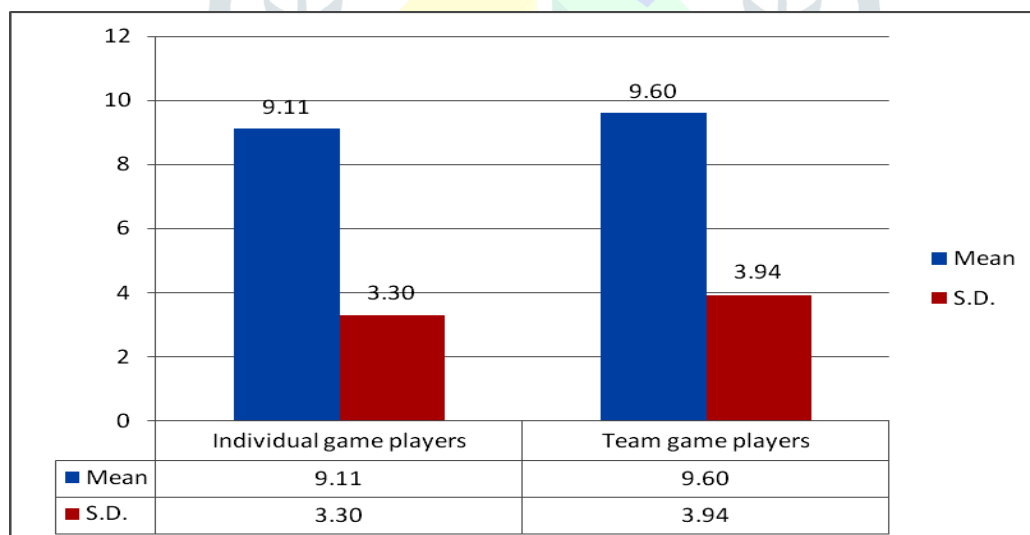


Table No 6

Comparison of educational adjustment level of individual game players and team game players

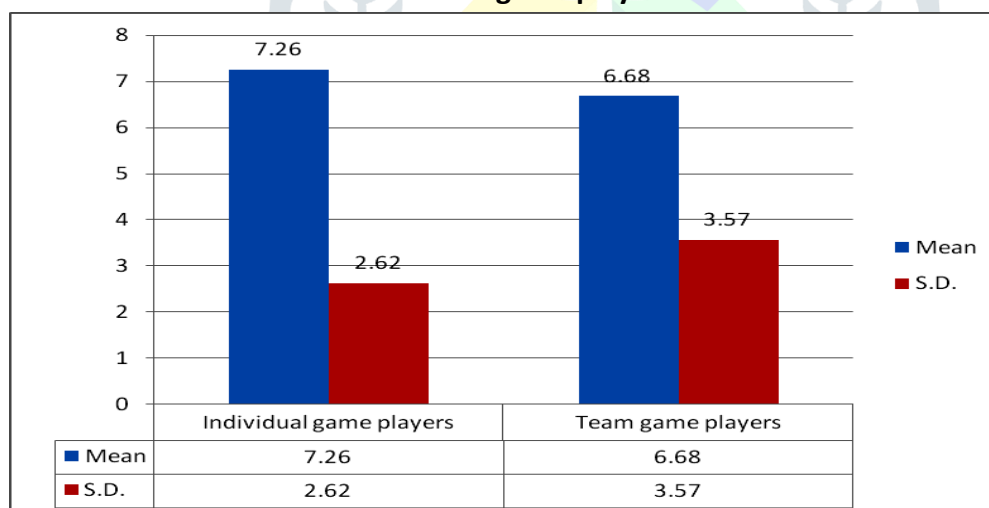
Groups	N	Mean	S.D	SED	t-ratio	Level of Significance
Individual game players	80	7.26	2.62	0.48	1.20	Not Significance
Team game players	80	6.68	3.57			

No Significance difference at any levels.

The table No.6 indicated the comparative results of educational adjustment of individual game players and team game player. In the case of educational adjustment of individual game players, mean value of 80 players is 7.26 and SD is 2.62. As well as educational adjustment of team game players, the mean value of 80 players is 6.68 and SD is 3.57. The mean value of the individual game players is higher than the team game players with SED is 0.48 depicts that more educational adjustment by individual game players in comparison to team game players. Further, the application of the t- test shows that there is no significant difference into the educational adjustment of individual game players and team game players at any significant levels. So, the hypothesis is accepted.

Fig. No 6

Graphical analyses of educational adjustment level of individual game players and team game players



CONCLUSION

On the basis of the study it is proved that there exist no significance difference in the agility of individual game players and team games players. There exist a significance difference in the strength of individual game players and team games players. The team game players were founded more strength than the individual game players. However, there is no significance difference between individual game players and team game players on anxiety. In case of adjustment, there is no significant difference between individual game players and team game players on health adjustment, emotional adjustment, educational adjustment.

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