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Effect of Interval Training and Core Strength Training On the development of Explosive Power among Long and Middle Distance University Level Athletes of Osmania University, Hyderabad

Suresh Vangala
Ph.D Scholar, Department of Physical Education
Osmania University, Hyderabad, Telangana
Email: suresh.vangla131@gmail.com
Prof. K. Surender Reddy
Professor (Retd) Department of Physical Education
Osmania University, Hyderabad, Telangana

Abstract:

The objective of the study is to determine the effect of Interval Training and Core Strength Training on the development of Explosive Power among Long and Middle Distance University Level Athletes of Osmania University. To achieve the purpose of this study, Ninety Male Long and Middle Distance Athletes of Osmania University were randomly selected between the age group of 18 to 25 Years . The selected subjects were randomly assigned into three groups. Group I 30 Members acted as experimental group which Interval Training Group, Group II 30 Members acted as experimental group which Core Strength Training Group III 30 Members did not participated in any special training and were strictly under control (CG). The Treatment is given to Long and Middle Distance Level Athletes for twelve weeks. To assess the Explosive Power the Standing Broad Jump Test were used in the Pre Test and Post Test of the Study. This study shows that the Experiment Group of Interval training performed better than Core Strength Training and control group. It is concluded that due to Interval Training there is a improvement of Explosive Power among Long and Middle Distance level athletes of Osmania University. Key words: Core Strength Training, Interval Training, explosive power etc.

INTRODUCTION:

Sports in contemporary space have emerged as a competitive branch in the national and international area. It is not simply participation or practice that conveys triumph to a competitor. Numerous things like biomechanics, physiology, training methods, sociology, sports medicine etc., influence sports life. All trainers, coaches are doing to enhance the performance of competitors for their individual nation Sports individuals of the respective nations endeavour best efforts at their dimension to bring praise and medals to their nation in various dimensions of international level competitions

Llanos-Lagos C, Ramirez-Campillo R, Moran J, Sáez de Villarreal E.(2024) studied Effect of Strength Training Programs in Middle- and Long-Distance Runners' Economy at Different Running Speeds: A Systematic Review with Meta-analysisTo compare the effect of different strength training methods (e.g., high loads, plyometric, combined methods) on the running economy in middle- and long-distance runners, over different running speeds, through a systematic review with meta-analysis.

A systematic search was conducted across several electronic databases including Web of Science, PubMed, SPORTDiscus, and SCOPUS. Using different keywords and Boolean operators for the search, all articles indexed up to November 2022 were considered for inclusion. In addition, the PICOS criteria were applied: Population: middle- and long-distance runners, without restriction on sex or training/competitive level; Intervention: application of a strength training method for ≥ 3 weeks (i.e., high loads (≥ 80% of one repetition maximum); submaximal loads [40-79% of one repetition maximum); plyometric; isometric; combined methods (i.e., two or more methods); Comparator: control group that performed endurance running training but did not receive strength training or received it with low loads (< 40% of one repetition maximum); Outcome: running economy, measured before and after a strength training intervention programme; Study design: randomized and non-randomized controlled studies. Certainty of evidence was assessed with the GRADE approach. A three-level random-effects meta-analysis and moderator analysis were performed using R software (version 4.2.1).

The certainty of the evidence was found to be moderate for high load training, submaximal load training, plyometric training and isometric training methods and low for combined methods. The studies included 195 moderately trained, 272 well trained, and 185 highly

trained athletes. The strength training programmes were between 6 and 24 weeks' duration, with one to four sessions executed per week. The high load and combined methods induced small (ES = - 0.266, p = 0.039) and moderate (ES = - 0.426, p = 0.018) improvements in running economy at speeds from 8.64 to 17.85 km/h and 10.00 to 14.45 km/h, respectively. Plyometric training improved running economy at speeds ≤ 12.00 km/h (small effect, ES = - 0.307, p = 0.028, β_1 = 0.470, p = 0.017). Compared to control groups, no improvement in running economy (assessed speed: 10.00 to 15.28 and 9.75 to 16.00 km/h, respectively) was noted after either submaximal or isometric strength training (all, p > 0.131). The moderator analyses showed that running speed (β_1 = - 0.117, p = 0.027) and VO_2max (β_1 = - 0.040, p = 0.020) modulated the effect of high load strength training on running economy (i.e., greater improvements at higher speeds and higher VO_2max).

Compared to a control condition, strength training with high loads, plyometric training, and a combination of strength training methods may improve running economy in middle- and long-distance runners. Other methods such as submaximal load training and isometric strength training seem less effective to improve running economy in this population. Of note, the data derived from this systematic review suggest that although both high load training and plyometric training may improve running economy, plyometric training might be effective at lower speeds (i.e., ≤ 12.00 km/h) and high load strength training might be particularly effective in improving running economy (i) in athletes with a high VO_2max, and (ii) at high running speeds.

Purpose of Research:

The objective of the study is to determine the effect of Interval Training and Core Strength Training on the development of Explosive Power among Long and Middle Distance University Level Athletes of Osmania University. To achieve the purpose of this study, Ninety Male Long and Middle Distance Athletes of Osmania University were randomly selected between the age group of 18 to 25 Years .

Methodology.

The selected subjects were randomly assigned into three groups. Group I 30 Members acted as experimental group which Interval Training Group, Group II 30 Members acted as experimental group which Core Strength Training Group III 30 Members did not participated in any special training and were strictly under control (CG). The Treatment is given to Long and Middle Distance Level Athletes for twelve weeks. To assess the Explosive Power the Standing Broad Jump Test were used in the Pre Test and Post Test of the Study.

Results and Discussion:

. **Table:1 To test the effectiveness of interval training and core strength training on standing broad jump Performance in Pre-Test and Post-Test and Control and Experimental Groups**

Group	SBJ(in Meters)	Mean	N	Std. Deviation	Std. Error Mean	t	df	p-value
Control Group	Pre test	2.3283	30	.13249	.02419		29	
Control Group	Post test	2.3283	30	.13249	.02419			
Experimental Group-I(Interval Training)	Pre test	2.3433	30	.05108	.00933	38.331	29	.000
Experimental Group-I(Interval Training)	Post test	2.5263	30	.05738	.01048			
Experimental Group-II (Core Strength Training)	Pre test	2.3100	30	.03270	.00597	35.629	29	.000
Experimental Group-II (Core Strength Training	Post test	2.4977	30	.03989	.00728			

The above table presents the standing broad jump (SBJ) performance of selected university level athletes. The Control Group shows that in the pre-test, the mean is 2.3283 meters, with standard deviation of 0.13249 and standard error of 0.02419. The post-test mean remains the same at 2.3283 meters, with standard deviation of 0.13249 and standard error of 0.02419, indicating no change in performance.

For Experimental Group-I (Interval Training) the pre-test mean is 2.3433 meters, with standard deviation of 0.05108 and standard error of 0.00933. The post-test mean significantly increases to 2.5263 meters, with standard deviation of 0.05738 and standard error of 0.01048. The mean difference in SBJ for Experimental Group-I is 0.1830 meters. For Experimental Group-I, the calculated t-value is 38.331 with 29 degrees of freedom, and the p-value is 0.000, which is less than the significance level of 0.05. It indicates that the calculated t-value is significantly greater than the critical t-value at the 0.05 level of significance. Hence, there is a significant difference observed from pre-test to post-test.

Similarly, Experimental Group-II(Core Strength Training) shows a pre-test mean of 2.3100 meters, with standard deviation of 0.03270 and standard error of 0.00597. The post-test mean increases to 2.4977 meters, with standard deviation of 0.03989 and standard error of 0.00728. The mean difference from pre-test to post-test is 0.1877 meters. For Experimental Group-II, the calculated t-value is 35.629 with 29 degrees of freedom, and the p-value is also 0.000, confirming a significant difference in performance.

Therefore, we conclude that there is a significant mean difference in standing broad jump performance between the pre-test and post-test for both Experimental Group-I and Experimental Group-II. The interval training and core strength training applied to these groups were effective in enhancing their standing broad jump performance.

From the table, we observe that the research hypothesis is accepted, affirming that the standing broad jump performance of participants in the experimental groups shows a significant improvement, reflecting the effectiveness of the interval training and core strength training methods in increasing their jump distances.

Conclusions:

This study shows that the Experiment Group of Interval training performed better than Core Strength Training and control group. It is concluded that due to Interval Training there is a improvement of Explosive Power among Long and Middle Distance level athletes of Osmania University

Recommendations:

Coaches and trainers should consider integrating Interval Training and Core Strength Training into their regular training regimens for Long and Middle distance athletes.. Tailoring the training to the specific demands of the sport and monitoring player progress will help optimize performance outcomes.

References:

Llanos-Lagos C, Ramirez-Campillo R, Moran J, Sáez de Villarreal E.(2024) Effect of Strength Training Programs in Middle- and Long-Distance Runners' Economy at Different Running Speeds: A Systematic Review with Meta-analysis, Sports Med**2024 Apr;54(4):895-932. doi: 10.1007/s40279-023-01978-**

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Effect of Weight Training and Core Strength Training On the development of Explosive Power among University Level Kho Kho Players of Osmania University, Hyderabad

M. Umesh
Ph.D Scholar, Department of Physical Education
Osmania University, Hyderabad, Telangana
Email: suresh.vangla131@gmail.com
Prof. K. Deepla
Secretary, BOC,IUT, Osmania University
Hyderabad, Telangana

Abstract:

The objective of the study is to determine the effect of Weight Training and Core Strength Training on the development of Explosive Power among University Level Kho Kho Players of Osmania University, Hyderabad To achieve the purpose of this study, Ninety Male Kho Kho Players of different Colleges of Osmania University were randomly selected between the age group of 18 to 25 Years .The selected subjects were randomly assigned into three groups. Group I 30 Members acted as experimental group which Weight Training Group, Group II 30 Members acted as experimental group which Core Strength Training Group III 30 Members did not participated in any special training and were strictly under control (CG). The Treatment is given to Kho Kho Players for twelve weeks. To assess the Explosive Power the Standing Broad Jump Test were used in the Pre Test and Post Test of the Study. This study shows that the Experiment Group of Core Strength training performed better than Weight Training and control group. It is concluded that due to Core Strength Training there is a improvement of Explosive Power among Kho Kho Players of Osmania University.
Key words: Core Strength Training, Weight Training, Explosive Power etc.

INTRODUCTION:

Sports form an important aspect of life. They play a vital role in bringing about physical, mental and social growth of individual at its best Physical fitness is a general state of health and well-being and, more specifically, the ability to perform aspects of sports or occupations. Physical fitness is generally achieved through correct nutrition, moderate-vigorous physical activity, exercise and rest. It is a set of attributes or characteristics seen in people and which relate to the ability to perform a given set of physical activities

J.Ravindar, Sr. Prof. B. Sunil Kumar (2023)Comparison of Explosive Power among Kabaddi Players and Kho Kho Players of Yadadri Bhuvanagiri District between the age group of 14 to 16 Years. The purpose of the study was to find out the effect of Explosive Power among Kabaddi Players and Kho Kho Players of Yadadri Bhuvanagiri District. For the present study the 25 Kabaddi players and 25 Kho Kho Players of Yadadri Bhuvangiri District between the age group of 14 to 16 Years.. The standing Broad Jump Test Pre and Post Test were conducted among two groups to assess the explosive power of legs. The Kabaddi Players Mean in Standing Broad Jump is 2.4867 and Kho Kho Players Mean is 2.3200 . The Standard Deviation of Kabaddi Players is 0.106 and Kho Kho Players is 0.052.Hence Kabaddi Players is having better Standing Broad Jump Performance compare to Kho Kho Players.The Sum of Squares and Mean Square between the Groups is 0.833 The F Value is 117.408 and Sig. of Anova is 0.000 that is below the value of 0,05. Hence there is difference between Kabaddi Players and Kho Kho Players in Standing Broad Jump i.e. explosive Power .The Kabaddi Players Performance is better than Kho Kho Players in Standing Broad Jump.

Purpose of Research:

The purpose of the study is to determine the effect of Weight Training and Core Strength Training on the development of Explosive Power among University Level Kho Kho Players of Osmania University, Hyderabad To achieve the purpose of this study, Ninety Male Kho Kho Players of different Colleges of Osmania University were randomly selected between the age group of 18 to 25 Years.

Methodology.

The selected subjects were randomly assigned into three groups. Group I 30 Members acted as experimental group which Weight Training Group, Group II 30 Members acted as experimental group which Core Strength Training Group III 30 Members did not participated in any special training and were strictly under control (CG). The Treatment is given to Kho Kho Players for twelve weeks. To assess the Explosive Power the Standing Broad Jump Test were used in the Pre Test and Post Test of the Study. This study shows that the Experiment Group of Core Strength training performed better than Weight Training and control group

Results and Discussion:

To test the effectiveness of Weight training , Core Strength Training and control groups among the University Level Kho-Kho players in Explosive power in centimeters.

Group	Explosive power in centimeters	Mean	N	Std. Deviation	Std. Error Mean	Paired Differences	t	df	P-value
Experiment –I(Wt. Trg)	Pre test	175.17	30	8.972	1.638	31.833	12.203	29	.000
	Post test	207.00	30	12.134	2.215				
Experiment –II(Core ST)	Pre test	175.86	30	9.116	1.664	32.373	16.617	29	.000
	Post test	208.24	30	11.486	2.097				
Control	Pre test	200.83	30	5.350	.977	1.233	2.445	29	.021
	Post test	202.07	30	5.771	1.054				

The above table shows that Explosive Power of University Kho-Kho players. For Experiment-I (Weight Training Group) the pre-test mean is 175.17 with 8.972 Std. Deviation and 1.638 Std. Error , whereas the post-test mean is 207.00 with 12.134 Std. Deviation and 2.215 Std. Error. The paired 't' test calculated value 12.203 which is greater than the table value at df = 29, $p=0.000 < 0.005$. From the pre-test to post-test differences show a statistically significant increase. It shows that the Weight training intervention had a significant effect among Kho-Kho players.

Similarly Experiment-II(Core Strength Training Group) the pre-test mean is 175.86 with 9.116 Std. Deviation and 1.664Std. Error, and the post-test mean is 208.24 with 11.486 Std. Deviation and 2.097 Std. Error. The paired 't' test calculated value 16.617 which is greater than the table value at df = 29, $p=0.000<0.005$. From the pre-test to post-test differences show a statistically significant increase. It shows that the weight training intervention had a significant effect among Kho-Kho players. For the Control group, the pre-test mean is 200.83 with 5.350 Std. Deviation and 0.977 Std. Error and the post-test mean is 202.07 with 5.771 Std. Deviation and 1.054 Std. Error. The paired 't' test calculated value 2.445 which is greater than the table value at df = 29, $p=0.021 < 0.05$. From the pre-test to post-test differences show a statistically significant increase, but the effect size is much smaller compared to Experiment-I and Experiment-II. It shows that there was a small but significant change in explosive power among the Control group, but it was not as pronounced as the changes seen in the Experiment-I and Experiment-II groups.

Conclusions:

It is concluded that due to Core Strength Training there is a improvement of Explosive Power among Kho Kho Players of Osmania University.

Recommendations:

Coaches and trainers should consider integrating Weight Training and Core Strength Training into their regular training regimens for Kho Kho Players. Tailoring the training to the specific demands of the sport and monitoring player progress will help optimize performance outcomes.

References:

J.Ravindar, Sr. Prof. B. Sunil Kumar (2023)Comparison of Explosive Power among Kabaddi Players and Kho Kho Players of Yadadri Bhuvanagiri District between the age group of 14 to 16 Years © 2023, IRJEdT Volume: 05 Issue: 11 | Nov-2023

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PSYCHOLOGICAL PARAMETERS OF FOREIGN GAME PLAYERS IN REFERENCE TO SEASON OF BIRTH: A COMPARATIVE STUDY

Devraj Diwakar[1]
Ph.D. Scholar, PGTD of Physical Education,
Sant Gadge Baba Amravati University, Amravati
e-mail: *diwardev007@gmail.com*

Dr. Tanuja S. Raut[2]
Professor& Head, PGTD of Physical Education,
Sant Gadge Baba Amravati University, Amravati
e-mail: *tanujaraut13@gmail.com*

Abstract:

The connection between season of birth and personality is a complex and debated topic, some research suggests that birth season might influence certain psychological traits and predispositions, particularly regarding mood and mental health risks. Some studies indicate that individuals born in specific seasons may exhibit higher tendencies towards certain mood disorders or personality characteristics. The researcher wants to find out the reason behind this variation. There are a lot of factors which are directly and indirectly effecting on health fitness and performance of the player. So, the researcher taken the study entitled, "Comparative Study of Selected Psychological Variables of Foreign Game Players in reference to their Season of Birth". The purpose of the study was to find out the difference of selected psychological parameters (Personality Traits & Self-esteem) of sports persons in reference to different season of birth. For the present study 40 male sports persons were selected from different colleges of the Sant Gadge Baba Amravati University, Amravati in Maharashtra state whose age is ranging between 19 to 24 years. Among them 10 sports persons born in each season were selected. Dr. Tom Buchanan's five point personality inventory and Dr. Morris Rosenberg Self-esteem scale was used for the collection of data. After the collection of data from sports persons the raw data were converted into standard one by using a statistical technique 'ANOVA' test for testing of hypothesis. At last it was found that among different personality traits only in conscientiousness trait has significant difference between the sports persons and also, there is no significant difference in self-esteem of the sports persons born in different seasons. Hence the researcher's hypothesis is rejected.**Key Words:** Personality, Self-esteem, Foreign game, Season of Birth etc.

Introduction:

Health is God's gift to us. Health refers to the physical and mental state of a human being. To stay healthy is not an option but a necessity to live a happy life. The basic laws of good health are related to the food we eat, the amount of physical exercise we do, our cleanliness, rest, and relaxation. A healthy person is normally more confident, self-assured, sociable, and energetic. A healthy person views things calmly, and without prejudice.

Health and fitness are closely inter-related to each other. Both are necessary for the human being to live a happy and healthy life. There are various things we have to take care all through the life in order be healthy and fit. There is no alternate to the health and fitness, we have to eat healthy food timely, do physical exercises daily, think positive and have patience and commitment towards good lifestyle. Being involved in physical activities on daily basis does something great to our body and mind. It makes us feel good, helps us to complete tough tasks, makes us pleasant all around and keeps us happy all time because our body releases a chemical called endorphins while we involved in the physical activities. Regular physical activities also reduces stress, improves sleep, boosts energy level, reduces symptoms of anxiety and depression, increases our self-esteem, makes us feel proud, improves confidence level and personality, etc.Seasonal variation in human birth rate has been found to be a nearly universal phenomenon. Also, birth seasonality has been found to be correlated with certain physiological and psychological traits of humans and animals. Season of birth (SOB) has been largely studied in the context of the life-course perspective on mental health. Within mental disorders, the most pervasive studies widely cited include those indicating that SOB is associated with increased risk of psychological disorders.In the latest study, a group of researchers from Budapest, Hungary presented evidence showing that the season you are born has a significant impact on your risk of developing mood disorders (such as depression or anxiety).

Personality:

Psychologically speaking personality is all that a person is. It is the totality of one's behavior towards oneself and others as well. It includes everything about the person, his physical, emotional, social, mental and spiritual make-up. It is all that a person has about him. Personality is covered with the 'social stimulus value' of the individual behavior, attributes and qualities or with conceptions of one's self which differentiate one human being from

other personalities the entire organization of the individual at each stage of his life. Traits like imagination, ambition or perseverance may be found in many people but it is in relation to other abilities and environment opportunities that they develop and influence life and behavior. Personality is the way be affected others. Personality is distinctive or unique. It is continually changing and growing people may acquires and develop in the course of his life and experience. Growth takes place by reorganization and integration of new experience and behavior in the total system. Disposition refers to habitual tendencies inherited or previous experience and term character is inter changeably with personality. Moral and ethical term involving judgments of good and bad.

Dimensions:

Instead of trying to sort people into types, trait theories assume that a personality can be described by its position on a number of continuous dimensions or scales, each of which represents a trait. Thus, we could rate an individual on a scale of intelligence, Neuroticism (emotional stability), aggressiveness, creativeness, or any of a number of other dimensions. A trait, then, refers to any characteristic in which one individual differs from another in a relatively permanent and consistent way. When we informally describe ourselves and others by such adjectives as friendly, cautious, excitable, intelligent, or anxious, we are using trait terms.

Self-esteem:

Self-esteem is how you think and feel about yourself. It's based on your beliefs and opinions about yourself. Self-esteem can be high or low, and it can affect how you feel about yourself, your relationships, and your mental health.

Self-esteem, also known as self-respect, is the confidence in one's worth or abilities. Low self-esteem is the opposite or lack of confidence in one's own worth. Self-esteem is shaped throughout one's life, it will increase and decrease throughout life but with essentially remain at the same level. Self-esteem has both positive and negative affects depending on if an individual has low or high self-esteem. There is more research on the effects of low self-esteem because it usually has to most negative effects on someone's health. Self-respect can also influence one's decision making, people with low self-esteem generally make poor or unwise decisions due to lack of confidence. Bullying can be caused by low self-esteem or

causes the development of low self-esteem. Someone who does not have high levels of self-confidence may try and belittle others to feel better about themselves; being bullied can in turn cause someone to feel bad about themselves, therefore, causing low self-esteem.

The researcher is belonging in sports profession from last seven years or more, where he observed variation in health and fitness level, though the peers' workout in same session and observed their psychology also and found a miserable difference. The researcher wants to find out the reason behind this variation. There are a lot of factors which are directly and indirectly effecting on health fitness and performance of the player. So, the researcher taken the study entitled, "**Comparative Study of Selected Psychological Variables of Foreign Game Players in reference to their Season of Birth**".

Purpose:

The purpose of the study was to find out the difference of selected psychological parameters (Personality Traits & Self-esteem) of sports persons in reference to different season of birth.

Hypothesis:

On the basis of literature reviewed by the researcher it was hypothesized that there will be significant difference of selected psychological parameters between the sports persons born in different season.

Methodology:

Source of Data:

For the present study the subjects were selected from different colleges of the Sant Gadge Baba Amravati University, Amravati in Maharashtra state. Those subjects were selected whose age is ranging between 19 to 24 years.

Selection of the Subject:

For the present study 40 male sports persons were selected from the affiliated colleges of SGB Amravati University, Amravati by purposive sampling technique. For selection of these 40 sports persons' date of birth researcher makes use of government Id document.

Among them 10 sports persons born in each season were selected. The eligibility of the subjects of this study is to participate inter-collegiate competition at least single time.

Summer	Monsoon	Autumn	Winter
March to May	**June to September**	**October to November**	**December to February**
10	10	10	10

Criterion Measures:

Sl. No.	Physical Fitness Variables	Tests
1.	Personality	Big Five Inventory (BFI)
2.	Self-esteem	Rosenberg Self-esteem Scale (RSE)

Administration of the tests:

Personality:

Dr. Tom Buchanan's Five point personality inventory was used for the collection of data of personality traits. The Big Five Inventory (BFI) is an instrument designed to assess the personality of individuals aged 18 and above. The inventory is consists of 44 items divided into five sub-scales representing each of the five personality factors: agreeableness, neuroticism, conscientiousness, openness, and extraversion.

Self-esteem:

Dr. Morris Rosenberg Self-esteem scale was used to measure the self esteem of the college students. It contains total 10 items/statements, where the subject has to be response in 4 point rating scale viz. Strongly agree, agree, disagree and strongly disagree. The RSE demonstrates a Guttman scale coefficient of reproducibility of .92, indicating excellent internal consistency. Test-retest reliability over a period of 2 weeks reveals correlations of .85 and .88, indicating excellent stability.

Collection of data:

At first the researcher contacted all the students personally in their respective colleges during class hours and explained them about the aim of the research study; thereafter Standard questionnaire was administered. The subjects were assured confidentiality of their responses.The research scholar also took help of other research scholars, classmates, teachers and other profession friends to record the datain a required manner.

Analysis of Data:

After the collection of data from sports persons of affiliated colleges of SGB Amravati University, Amravati of Maharashtra, the raw data were converted into standard one by using a statistical technique 'ANOVA' test for testing of hypothesis.

Table 1: Comparison of Different Personality Traits in Reference to Different Seasons of Birth of Sports Persons

Variables	Average				Calculated F	Critical F
	Summer	Monsoon	Autumn	Winter		
Openness	21.75	16.40	19.95	24.70	1.56	2.87
Conscientiousness	38.75	46.80	41.20	58.30	3.19*	
Extraversion	41.70	49.35	38.70	33.75	2.32	
Agreeableness	47.40	50.40	42.80	40.20	0.96	
Neuroticism	44.60	30.55	42.25	35.80	2.29	

*** denotes Significant**

From the above given table it is being said that the winter born persons have more openness than others. Conscientiousness personality trait is better in winter born also. Again, extraversion and agreeableness is better in monsoon born persons, where as the summer born are good in neuroticism. All over, there is mean difference of different personality traits between sports persons born in different seasons. To find out whether it is significant or not special statistical technique 'F' test (ANOVA) was used. It was found that the value of Tabulated 'F' is 2.87 and the value of Calculated 'F' in openness is 1.56, extraversion is 2.32, agreeableness 0.96 and neuroticism is 2.29 which all are less than tabulated 'F' at 0.05 level of confidence so it is said that there is no significant difference in openness, extraversion, agreeableness and neuroticism personality trait of the sports persons born in different

seasons. But, in Conscientiousness the calculated value of 'F' is 3.19, which is greater than table value of 'F'. Hence the researcher's hypothesis is rejected.

Graph: 1 Graphical Representation of Personality Trait of the Sports Persons Born in Different Seasons

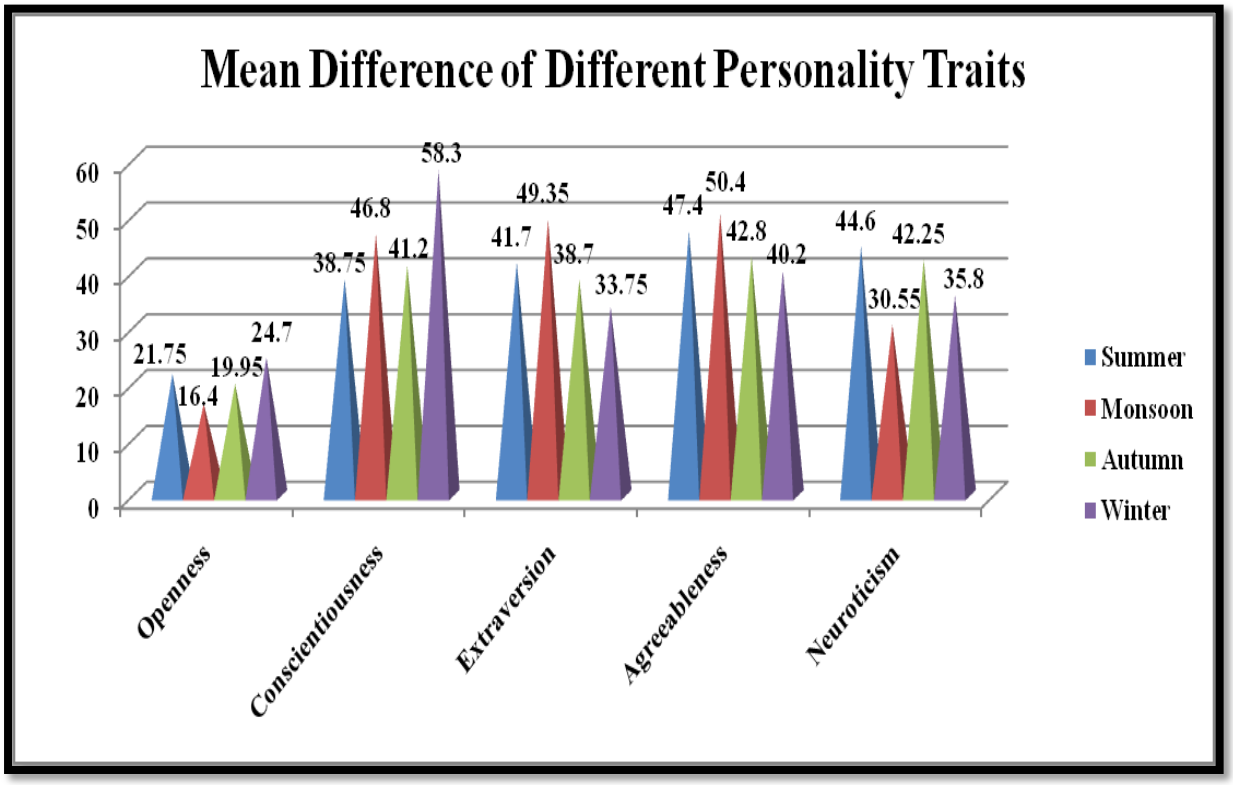
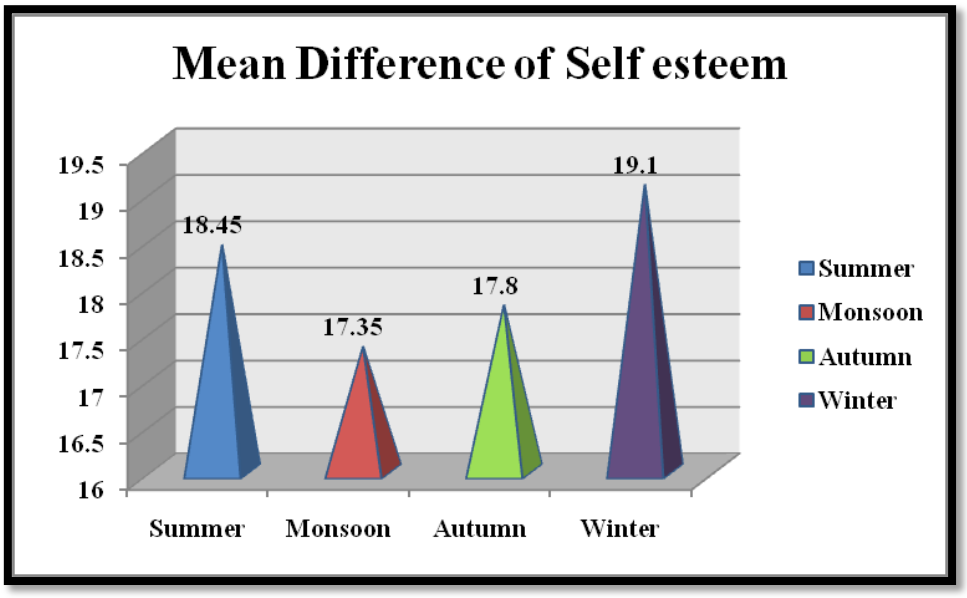


Table 2: Comparison of Self-esteem in Reference to Different Seasons of Birth of Sports Persons

Variables	Average				Calculated F	Critical F
	Summer	Monsoon	Autumn	Winter		
Self esteem	18.45	17.35	17.80	19.10	1.27	2.87

From the above given table it is being said that the mean of self-esteem of the sports persons born in Summer is 18.45, Monsoon is 17.35, Autumn is 17.80 and Winter is 19.10. There is mean difference of self-esteem between sports persons born in different seasons. Whether it is significant or not can be calculated by using special statistical technique 'F' test (ANOVA). It was found that the value of 'F' is 2.87 and the value of Calculated 'F' is 1.27 which is less than tabulated 'F' at 0.05 level of confidence so it is said that there is no significant difference in self-esteem of the sports persons born in different seasons. Hence the researcher's hypothesis is rejected.

Graph: 2 Graphical Representation of Self-esteem of the Sports PersonsBorn in Different Seasons



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RELATIONSHIP OF GROUP COHESION WITH LEADERSHIP BEHAVIOUR AND TEMPERAMENTAL TRAITS OF INDIAN GAME PLAYERS

Dr. Tanuja S. Raut[1]
Professor & Head, PGTD of Physical Edn
Sant Gadge Baba Amravati Univ. Amravati
e-mail: *tanujaraut13@gmail.com*

Sanjay Kumar[2]
Ph.D. Research Scholar, Dept. of Physical Edn
Sant Gadge Baba Amravati University, Amravati
e-mail: *sanjaykumarshivshall@gmail.com*

Abstract:

A strong leader plays a crucial role in fostering and maintaining high group cohesion by creating a positive team environment, promoting open communication, and ensuring everyone feels valued and part of the shared purpose. Effective leadership significantly contributes to a group's sense of unity and belonging, while a cohesive group can also empower and support its leaders, leading to better overall performance. On the other hand the temperamental trait can significantly impact how they interact within a group and contribute to the level of group cohesion. So the researcher has taken the study entitled Relationship of Group Cohesion with Leadership Behaviour and Temperamental Traits of Indian Game Players The aim of this investigation was to find out the relationship of group cohesion with leadership behaviour and temperamental traits of Indian game players of Amravati district. For fulfilling the purpose, the researcher collected data from selected Indian game players (i.e. Kabaddi and Kho-kho) of Amravati district, affiliated under Sant Gadge Baba Amravati University, Amravati of Maharashtra. The researcher has taken 38 male and 38 female Indian game players, ranging from 21-26 years by Simple random sampling method. The data of Group Cohesion was measured by the Group Cohesion Scale-Revised (GCS-R; Treadwell et al., 2001). The data of Leader Behaviour was measure by Leader Behaviour Scale (LBS) constructed by Dr. Asha Hingar (Jaipur) and the data of Temperamental Trait was collected by using standard questionnaire of Buss measure of temperament (EASI) given by buss & Plomin 1984. The data of group cohesion with leadership behavior and temperamental traits was analyzed by using Pearson correlation test. At last it was found that there is no significant relationship of group cohesion with leadership behaviour and temperamental traits of male and female Indian game players. So, the researcher's hypothesis is rejected.**Key Words:** Relationship, Group Cohesion, Leader Behaviour, Temperamental Trait, Male and Female, Indian Game Players etc.

Introduction:

Psychology is a science of behaviour of the organization. The word "psychology" has come from the Greek word 'psyche' meaning 'soul' and the 'logos' meaning 'study'. In incident time psychology was not a separate discipline. It was a part of philosophy. In the later part of the nineteenth century psychology was perhaps dissociated from philosophy. Since then it has never looked back. It was arts subject like philosophy. Gradually it developed into scientific discipline. Objections are still raise to considering psychology as a science.

Psychology is a hypothetical and practical discipline involving the systematic study of mental processes and behaviour. Psychology also references to the application of such material to several spheres of human activity, counting relating to individuals' everyday lives and the treatment of mental illness. Sport as activity, recreation, leisure-time activity is a universal phenomenon but sport as competition, is for the genetically gifted, whose number at any point of time may be limited. Maximum persons love to watch sport; they like the thrill and enthusiasm accruing from it. Psychology changes its hue with the change in situation: In education, it is educational psychology, in medicine it is medical psychology, in industry, it is industrial psychology, in sport, it is sport psychology, so on and so onward. Sport psychology, as such, is a current addition to the ever-expanding family of psychology.

Group Cohesion:

Many people wonder what the team cohesion means. Group cohesiveness/Team Cohesiveness also known as Social cohesion is a degree of unity of any group. Team cohesiveness is a degree to which group members are attracted or motivated by each other. Basically, group cohesiveness is the closeness amongst the group members.

Cohesion refers to the degree of unity in a group. It shows the extent to which the members are attracted to each other while working towards the goal or to satisfy the social and emotional needs of its members. Members of a highly cohesive group develop some common characters- they respect everyone, fully commit to group decisions, create accountability among the members and assume good motives. Positive norms can improve group cohesiveness and lead to increased group performance.

Team cohesiveness increases the overall performance of any group. Organizations consider employees as an asset because the organization is dependent on the people working there. As more and more people are involved in the complex functioning of the company, an organization faces the problem of group cohesiveness and its impact on the overall productivity of the organization as well as the in-office harmony.

Leadership Behaviour:

In education, we often confuse leadership with sheer bingers. But this use of term applies equally to either things or people and fails to take into account the central psychological characteristics of leader behaviour. The behaviour of the leader and the behaviour of both are determined to great degree by formal requirements imposed by the institution of which the group is a part. Leadership behaviours are the combination of specific characteristics that leaders have and the actions they take. Strong leadership behaviours make someone an effective leader. Negative leadership behaviours can undermine their credibility and make them less convincing, effective and inspiring.

Good leadership qualities and behaviour motivate all followers to give their best and achieve their highest goals, no matter what the conditions. Being under the wing of good leadership is essential for one's journey of professional growth. Credible leadership and management are the vital founding pillars of a strong and sturdy organization. And when times get tough, it is all the more valuable to have dependable leaders who are effectively able to stimulate everyone to put their best foot forward and in turn help their organization sail through storms.

Temperamental Trait:

Today researchers generally think of temperament as general pattern of behaviour and mood that can be expressed in many different ways and that depending on one's experience, develop into different personality traits. How these general disposition develop into stable personality traits depends on a complete interplay of one's genetic disposition and the environment that a person grows up in.

In ordinary English usage, a temperamental person is someone who is high strung, easily excitable, prone to quick changes in mood, or fickle. The most typical definition of temperament was proposed by Thomas and Chess .Temperament by their definition, can be

equated to the term behaviour style. Each refers to the "how" rather than the "what "or the "why" of behaviour. To personality psychologist temperament refers to three aspects of behaviour, that appear relatively early in life: activity level, mood and emotional responsiveness to other people. Individual differences among body's activity level, general level of irritability and positive versus negative emotional tone when interacting with people are the behavioural characteristics or dimensions. Most temperament researchers assume to be both genetically based and influenced by the babies' early environments.

Purpose:

The purpose of the study was to find out the relationship of group cohesion with leadership behaviour and temperamental traits of Indian game players.

Hypothesis:

On the basis of experience and literature searched by the researcher it was hypothesized that, there will be a significant relationship of group cohesion with leadership behaviour and temperamental traits of male and female Indian game players.

Methodology:

Source of Data:

For present study the data was collected from selected Indian game players (i.e. Kabaddi and Kho-kho) of Amravati district, affiliated under Sant Gadge Baba Amravati University, Amravati of Maharashtra.

Selection of subjects:

For the present study, thirty eight (38) male and thirty eight (38) female Indian game players (i.e. Kabaddi and Kho-kho) were selected. The age was ranging from 21-26 years old.

Sampling Method:

For the present study the subjects were selected by using Simple random sampling method.

Criterion measures:

Following are the criterion measures which were responsible for collection of data, for testing of hypothesis.

S. No	Variables	Test
01	Group Cohesion	Standard Questionnaire
02	Leadership Behaviour	Standard Questionnaire
03	Temperamental Trait	Standard Questionnaire

Group Cohesion:

The group cohesion will be measured by the Group Cohesion Scale-Revised (GCS-R; Treadwell et al., 2001). It is a 25-item self-report measure used to assess group cohesion. Each item is rated on a 4-point Likert scale; from strongly disagree to strongly agree. Group cohesion is measured by examining interactions among group members, decision-making, vulnerability of group members, communication among group members, and consistency between group and individual goals. Internal consistency, as measured by Cronbach‟s alpha, has been obtained, and ranged from .49 to .89 on pre-assessment and .77 and .90 on post-assessment.

Leadership Behaviour:

Leader Behaviour will be measure by Leader Behaviour Scale (LBS) constructed by Dr. Asha Hingar (Jaipur). To measure various dimensions of Leader‟s behaviour effectiveness focusing on positive and constructive dimensions subsequently a 6 (six) dimensional scale comprising 30 (thirty) items will be use.

Temperamental Trait:

Buss measure of temperament (EASI) will use for data collection. It was given by buss & Plomin 1984. It is a self-report questionnaire. This self-reports questionnaire consists of 45 questions in all with 5 point rating scale. Each question has five responses viz. strongly yes, Yes, Neither can say Yes/No, No and Strongly No.

Collection of Data: At first researcher explained about the aim of the research study; thereafter the questionnaires were administered. The subjects were assured about the confidentiality of their responses.

Level of Significance: To test the hypothesis the level of significance was set at 0.05 level of confidence which was considered adequate and reliable for the purpose of this study.

Statistical Analysis:

After the collection of data from Indian game players, the raw data were converted into standard one by using a statistical technique Pearson correlation test for testing of hypothesis.

Table: 1 Relationship between Group Cohesion and Leadership Behaviour of Male and Female Indian Game Players

Gender	Observation	Mean	SD	df	Obtained 'r'	Tabulated 'r'
Male	**Group Cohesion**	27.50	6.471	36	0.18899	0.320
	Leadership Behaviour	101.55	10.176			
Female	**Group Cohesion**	34.45	8.284		-0.22136	
	Leadership Behaviour	105.63	9.428			

According to Table 1, it is found that correlation between group cohesion and leadership behaviour of male Indian game players, inter correlation matrix was calculated. The calculated 'r' was found (0.18899), which is less than tabulated 'r' (0.320) at 0.05 level of significance. This indicates or shows that there is no significant relationship between group cohesion and leadership behaviour of male Indian game players. So, the researcher's hypothesis is rejected.

It is also found that correlation between group cohesion and leadership behaviour of female Indian game players, inter correlation matrix was calculated. The calculated 'r' was found (-0.22136), which is less than tabulated 'r' (0.320) at 0.05 level of significance. This indicates or shows that there is no significant relationship between group cohesion and leadership behaviour of female Indian game players. So, the researcher's hypothesis is rejected.

Graph 1: Showing Relationship of Group Cohesion and Leadership Behaviour of Male and Female Indian Game Players

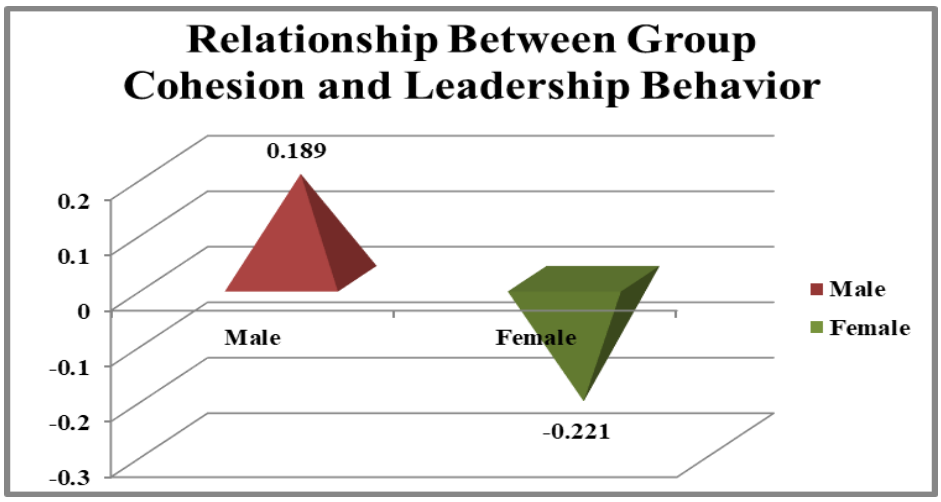


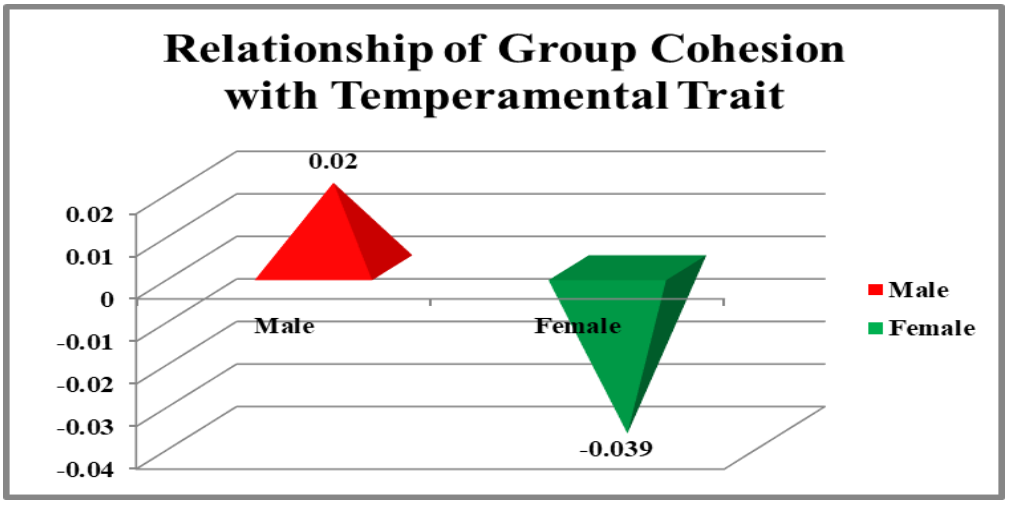
Table 2: Relationship between Group Cohesion and Temperamental Trait of Male and Female Indian Game Players

Gender	Observation	Mean	SD	df	Obtained 'r'	Tabulated 'r'
Male	Group Cohesion	27.50	6.471	36	0.02008	0.320
	Temperamental Trait	151.08	12.785			
Female	Group Cohesion	34.45	8.284		-0.03981	
	Temperamental Trait	147.11	10.635			

According to Table 2, it is found that correlation between group cohesion and temperamental trait of male Indian game players, inter correlation matrix was calculated. The calculated 'r' was found (0.02008), which is less than tabulated 'r' (0.320) at 0.05 level of significance. This indicates or shows that there is no significant relationship between group cohesion and temperamental trait of male Indian game players. So, the researcher's hypothesis is rejected.

It is also found that correlation between group cohesion and temperamental trait of female Indian game players, inter correlation matrix was calculated. The calculated 'r' was found (-0.03981), which is less than tabulated 'r' (0.320) at 0.05 level of significance. This indicates or shows that there is no significant relationship between group cohesion and temperamental trait of female Indian game players. So, the researcher's hypothesis is rejected.

Graph 2: Relationship of Group Cohesion and Temperamental Trait of Male and Female Indian Game Players



Conclusion:

In the beginning of this study it was hypothesized by the researcher that there will be a significant relationship of group cohesion with leadership behaviour and temperamental traits of male and female Indian game players. On the basis of results it can be concluded that there is no significant relationship of group cohesion with leadership behaviour and temperamental traits of male and female Indian game players. So, the researcher's hypothesis is rejected.

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A COMPARATIVE STUDY OF SELECTED PHYSIAL FITNESS PARAMETERS AMONG DIFFERENT BLOOD GROUP OF SCHOOL GOING CHILDREN

Savita P. Bawanthade[1]
Ph.D. Scholar, PGTD of Physical Education,
Sant Gadge Baba Amravati University, Amravati
e-mail: *savitabawanthade12@gmail.com*

Dr. Tanuja S. Raut[2]
Professor& Head, PGTD of Physical Education,
Sant Gadge Baba Amravati University, Amravati
e-mail: *tanujaraut13@gmail.com*

Abstract:

Sport training has an impact on physical fitness and sports performance. The recent development in the science of physical education is one of the important factors in measuring and determining the nature of athletes' physical, physiological and biochemical adaptations and responses through sports physiology. So, the researcher also ***Compared selected physical fitness parameters among different blood group of school going children*** in this study. The purpose of the study was to compare the physical fitness parameters i.e. Muscular strength, endurance and flexibility of the school going boys having (+ve) blood group.It was hypothesized by the researcher that, there would be a significant difference in selectedphysical fitness parameters of school going children. For the present study the data was collected from the students of class 6 to 8 of different middle schools of Amravati, Maharashtra who had (+ve) blood groups onlyi.e. A+ve, B+ve, AB+ve and O+ve.10 school going boys of each +ve blood group total 40 boys were selected from middle schools of Amravati, Maharashtra, whose age ranging from 12-14 years old by using purposive sampling method.Standard physical fitness tests were used to measure the physical fitness of the students.After the collection of data from school going students of Amravati, Maharashtra, the raw data were converted into standard one by using a statistical technique 'ANOVA' test for testing of hypothesis. At last, the result shows that there is significant difference in strength and flexibility but no significant difference in endurance between the boys having (+ve) blood group. Hence, the researcher's hypothesis is accepted.**Keywords:** Blood group, Physical fitness, School going Children, Positive blood group, Comparison.

Introduction:

Physical activity and exercise is important for everyone. Children, adolescents, and adults of all ages need regular physical activity. Physical activity promotes good health, and we should stay active throughout all stages of our life regardless of our body type or BMI. Understanding the benefits of physical fitness and knowing how active you should be can help you maintain good health and improve your overall quality of life.

Physical activity is defined as any bodily movement produced by skeletal muscles that result in energy expenditure. The energy expenditure can be measured in kilocalories. Physical activity in daily life can be categorized into occupational, sports, conditioning, household, or other activities Exercise is a subset of physical activity that is planned, structured, and repetitive and has as a final or an intermediate objective the improvement or maintenance of physical fitness.

Physical Fitness:

Physical fitness is the body's capability to perform daily tasks without experiencing fatigue or injury physically. It is important because it prevents injury, slows the progression of chronic and progressive diseases, improves memory and quality of sleep, improves mood, and reduces stress.

Physical fitness is a set of attributes that are either health- or skill-related. Being physically fit has been defined as "the ability to carry out daily tasks with vigor and alertness, without undue fatigue and with ample energy to enjoy leisure-time pursuits and to meet unforeseen emergencies" The degree to which people has these attributes can be measured with specific tests.

Factors Affecting Fitness:

According to numerous studies in this field, health-related physical fitness is influenced by various other factors, such as body size, maturity status, growth status, nutritional status, time spent performing the physical activity, and family income.Several studies indicated that children who differ in maturity status also differ in body size, physique, and physical performance. Hence, another concernof the study is the effect of these factors on the health-related physical fitness of the student.

In many factors which effect physical fitness, Blood type is one of many physical characteristics determined by genetics, along with eye color and dominant hand. Some studies suggest that blood type may be related to physical fitness, including endurance, anaerobic fitness, and flexibility.Results show that blood group O has the highest mean in muscular endurance, power, and speed variables among the four blood groups, and blood group AB has the lowest mean. Regarding the agility variable, blood group O has the highest mean, and blood group B has the lowest.

Blood Groups and Physical Fitness

Blood type (A, B, AB, O, and Rh factor) is a genetic trait that can influence aspects of health, but there's no definitive evidence proving a direct relationship between blood type and fitness levels. However, some studies and theories have suggested indirect influences. Here's what is commonly discussed:

Blood Type and Diet (A Theory by Peter D'Adamo):

Peter D'Adamo, a naturopathic physician, proposed in his book "Eat Right 4 Your Type" that blood types can influence how individuals should eat for optimal health. While this theory isn't widely accepted in mainstream science, some believe that certain blood types might perform better in specific diets or fitness routines:

Type O: Known as the "hunter-gatherer" type, proponents of the theory suggest that people with this blood type might perform better with high-protein diets and intense physical exercise (like strength training and cardiovascular workouts).

Type A: Suggests a more plant-based diet and less intense forms of exercise, such as yoga or long-distance running, as people with this blood type may have more sensitive immune systems.

Type B: This group may benefit from balanced, varied diets and fitness routines that include both strength and endurance activities.

Type AB: People with this blood type might thrive on a mixed diet and balanced exercise routine, with both strength and aerobic workouts.

Purpose of the Study:

The main purpose of the study was to compare the physical fitness parameters i.e. Muscular strength, endurance and flexibility of the school going boys having (+ve) blood group.

Hypothesis:

On the basis of experience and knowledge it was hypothesized by the researcher that, there would be a significant difference in selectedphysical fitness parameters of school going children.

Methodology:

Source of Data:

For the present study the data was collected from the students of class 6 to 8 of different middle schools of Amravati, Maharashtra who had (+ve) blood groups onlyi.e. A+ve, B+ve, AB+veand O+ve.

Selection of Subjects:

For the present study 10 school going boys of each +ve blood group total 40 boys were selected from middle schools of Amravati, Maharashtra, whose age ranging from 12-14 years old by using purposive sampling method.

Tests used for collection of data:

Sl. No.	Physical Fitness Parameter	Test Used
1.	**Strength**	One minute Sit Up test
2.	**Endurance**	600 meter Run/Walk
3.	**Flexibility**	Sit & Reach test

Collection of data:

At first the researcher contacted all the students personally in their respective schools during free hours and explained them about the aim of the research study; thereafter Standard tests were conducted during their game class with the help of PE teachers. The blood group of the subjects was confirmed from the school documents given by the parents of the students with the help of school authority and assured confidentiality of their data.The research

scholar also took help of other research scholars, classmates, PE teachers and school authority to record the datain a required manner.

Statistical Analysis:

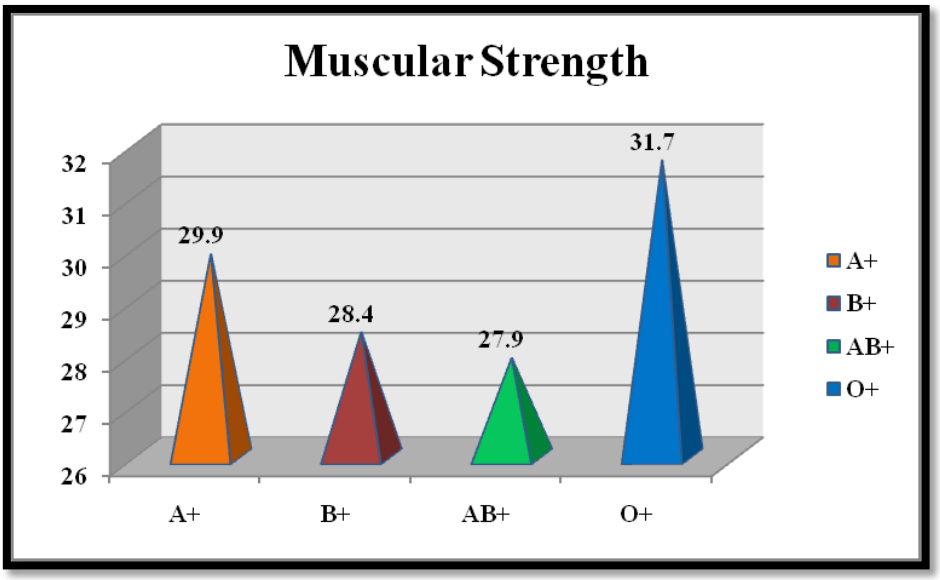
The data of selected physical fitness variables were collected through standard tests were tabulated and further analyzed using ANOVA test. The tables and graphs were presented below:

Table 1A: Comparison of Muscular Strength in Reference to Different Positive Blood Groups of School Going Children

Groups	Count	Sum	Average	Variance
A +ve	10	299	29.9	5.43
B +ve	10	284	28.4	2.71
AB +ve	10	279	27.9	2.77
O +ve	10	317	31.7	9.57

From the above given table it is being said that the mean of muscular strength of the school boys having A +ve blood group is 29.9, B +ve is 28.4, AB +ve is 27.9 and O +ve is 31.7. There is mean difference of muscular strength between the school boys having different +ve blood group. Whether it is significant or not it can be shown by using special statistical technique 'F' test (ANOVA).

Graph: 1 Graphical Representation of Muscular Strength of the School Boys Having Different Positive Blood Group



ANOVA Table:

Table 1B: One Way Analysis of Variance (ANOVA) of Muscular Strength in Reference to Different Blood Group of School Boys

Source of Variation	Sum of Square	df	MS	F	P-value	F crit
Between Groups	87.675	3	29.225	5.709	0.00265	2.866
Within Groups	184.3	36	5.119			
Total	271.975	39				

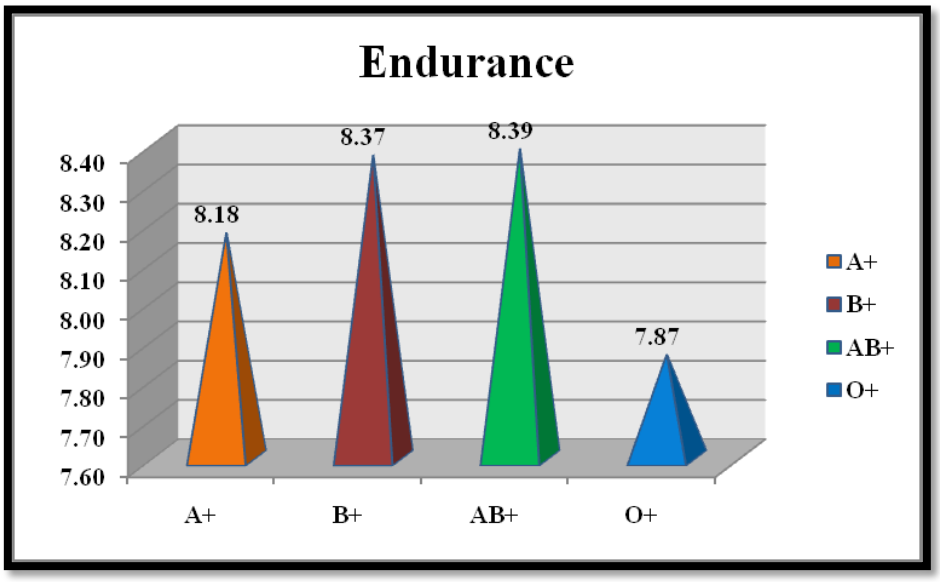
In the given table the value of Tabulated 'F' is 2.87 and the value of Calculated 'F' is 5.709 which is greater than tabulated 'F' at 0.05 level of confidence so it is said that there is significant difference in muscular strength of the school boys having differentblood group. Hence the researcher's hypothesis is accepted.

Table 2A: Comparison of Endurance in Reference to Different Positive Blood Groups of School Going Children

Groups	Count	Sum	Average	Variance
A +ve	10	81.76	8.176	0.663
B +ve	10	83.74	8.374	0.719
AB +ve	10	83.9	8.39	0.518
O +ve	10	78.65	7.865	0.630

From the above given table it is being said that the mean of endurance of the school boys having A +ve blood group is 8.176, B +ve is 8.374, AB +ve is 8.39 and O +ve is 7.86. There is mean difference of endurance between the school boys having different +ve blood group. Whether it is significant or not it can be shown by using special statistical technique 'F' test (ANOVA).

Graph: 2 Graphical Representation of Endurance of the School Boys Having Different Positive Blood Group



ANOVA Table:

Table 2B: One Way Analysis of Variance (ANOVA) of Endurance in Reference to Different Blood Group of School Boys

Source of Variation	Sum of Square	df	MS	F	P-value	F crit
Between Groups	1.792	3	0.597	0.944	0.429	2.866
Within Groups	22.77	36	0.633			
Total		39				

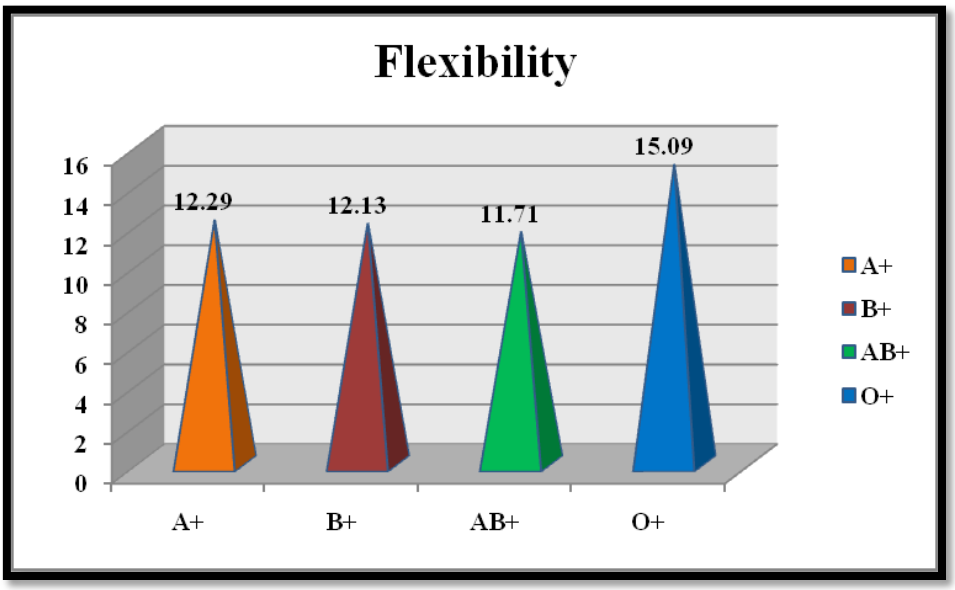
In the given table the value of Tabulated 'F' is 2.87 and the value of Calculated 'F' is 0.944 which is less than tabulated 'F' at 0.05 level of confidence so it is said that there is no significant difference in Endurance of the school boys having different blood group. Hence the researcher's hypothesis is rejected.

Table 3A: Comparison of Flexibility in Reference to Different Positive Blood Groups of School Going Children

Groups	Count	Sum	Average	Variance
A +ve	10	122.9	12.29	4.616
B +ve	10	121.3	12.13	1.522
AB +ve	10	117.1	11.71	1.196
O +ve	10	150.9	15.09	1.261

From the above given table it is being said that the mean of flexibility of the school boys having A +ve blood group is 12.29, B +ve is 12.13, AB +ve is 11.71 and O +ve is 15.09. There is mean difference of flexibility between the school boys having different +ve blood group. Whether it is significant or not it can be shown by using special statistical technique 'F' test (ANOVA).

Graph: 3 Graphical Representation of Flexibility of the School Boys Having Different Positive Blood Group



ANOVA Table:

Table 3B: One Way Analysis of Variance (ANOVA) of Flexibility in Reference to Different Blood Group of School Boys

Source of Variation	Sum of Square	df	MS	F	P-value	F crit
Between Groups	71.411	3	23.804	11.076	0.00002	2.866
Within Groups	77.368	36	2.149			
Total	148.78	39				

In the given table the value of Tabulated 'F' is 2.87 and the value of Calculated 'F' is 11.076 which is greater than tabulated 'F' at 0.05 level of confidence so it is said that there is significant difference in flexibility of the school boys having different blood group. Hence the researcher's hypothesis is accepted.

Discussion:

While physical fitness is largely determined by lifestyle factors such as exercise, diet, and sleep, there isn't clear, proven evidence that blood group has a significant influence on fitness levels. Most fitness experts recommend a well-rounded approach to physical activity and nutrition, regardless of blood type.

Blood type may be a factor to consider when selecting athletes for sports and dance competitions that require specific physical fitness levels.

Blood type may also be a factor to consider when designing fitness programs for people with different physical fitness levels.

Conclusion:

1. There is significant difference in muscular strength of the school boys having +ve blood groups.
2. There is no significant difference in Endurance of the school boys having +ve blood groups.
3. There is significant difference in flexibility of the school boys having +ve blood groups.

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A Comparative Analysis on the Speed, Agility, Flexibility, Reaction Ability, and Performances among Volleyball and Basketball Players

Dr. Rajanna
Professor & Head
Department of Physical Education, University of Agricultural Sciences, Raichur, Karnataka

Abstract:
This study aims to compare the physical performance attributes, including speed, agility, flexibility, and reaction ability, between volleyball and basketball players. Both sports demand high levels of athleticism, but they differ in their specific physiological and biomechanical requirements. Through standardized tests and performance measures, we assessed the speed, agility, flexibility, and reaction time of athletes from both sports. The research involved 30 participants from each group (volleyball and basketball) who were subjected to speed drills, agility tests (shuttle run), flexibility assessments (sit-and-reach test), and reaction time measurements. The findings suggest that basketball players demonstrate superior speed and reaction time, whereas volleyball players exhibit greater flexibility and agility in some cases. The results are discussed in the context of the distinct nature of each sport and its specific demands on physical attributes. This study provides valuable insights for trainers and coaches looking to enhance sport-specific conditioning for athletes in both disciplines.

Introduction:

Athletic performance in team sports like volleyball and basketball involves a wide range of physical attributes that contribute to success in competition. Two key factors in such performance are speed and agility, which play a crucial role in determining the outcome of a game. While volleyball and basketball share some similarities in the need for quick movements and explosive actions, each sport has unique demands on an athlete's body. Basketball players tend to require more cardiovascular endurance, explosive power for jumping, and reaction time for rapid changes in direction, while volleyball players focus on agility, flexibility, and quick bursts of movement for successful blocking, spiking, and passing.

This study explores the differences between the two groups with respect to specific physical attributes, aiming to provide a comparative analysis that can inform training programs and performance expectations in both sports.

Methodology:

A sample of 60 athletes, with 30 volleyball players and 30 basketball players, participated in the study. The selection criteria required all participants to have a minimum of two years of competitive experience in their respective sports. The tests performed were as follows:

Speed Test: A 40-meter sprint was used to measure the athletes' raw speed.

Agility Test: The Illinois agility test (shuttle run) was administered to assess the athletes' ability to change direction rapidly.

Flexibility Test: The sit-and-reach test was conducted to measure lower back and hamstring flexibility.

Reaction Time: The forearm reaction time was measured by using an electronic reaction timer system.

Each athlete completed the tests twice, with the best performance recorded for analysis.

Results:

The data obtained from the tests were statistically analyzed using descriptive statistics, including mean, standard deviation, and t-tests for comparison between volleyball and basketball players.

Test	Basketball Players (n=30)	Volleyball Players (n=30)	t-value	p-value
Speed (Seconds)	5.98 ± 0.22	6.12 ± 0.24	1.87	0.07
Agility (Seconds)	14.5 ± 0.63	13.2 ± 0.49	2.44	0.02
Flexibility (cm)	31.5 ± 4.30	35.2 ± 3.92	2.64	0.01
Reaction Time (ms)	180 ± 20	195 ± 15	2.15	0.04

Key Findings:

Speed: Basketball players showed slightly faster times, although the difference was not statistically significant ($p > 0.05$).

Agility: Volleyball players were significantly more agile, completing the shuttle run faster ($p < 0.05$).

Flexibility: Volleyball players had greater flexibility, as indicated by a significantly higher mean score in the sit-and-reach test ($p < 0.05$).

Reaction Time: Basketball players had faster reaction times, though this difference was also statistically significant ($p < 0.05$).

Discussion:

The comparative analysis revealed interesting distinctions in the performance traits of volleyball and basketball players. The faster sprint times for basketball players highlight the sport's emphasis on quick bursts of speed for court coverage, while the superior agility of volleyball players suggests that their sport demands quicker lateral movements, such as for blocking and spiking.Flexibility differences can be attributed to the distinct biomechanics of each sport, where volleyball players often engage in overhead movements requiring greater shoulder and back flexibility, while basketball players focus more on explosive vertical jumps and running.Moreover, the faster reaction time among basketball players is likely a result of the sport's fast-paced nature, where players must quickly adjust to opponent movements and make decisions under pressure.These findings can influence training regimens in both sports. For example, volleyball players may benefit from exercises focusing on flexibility and lateral quickness, while basketball players should continue to work on explosive power and reaction speed.

Conclusion:

This study offers a clear comparative analysis of speed, agility, flexibility, and reaction ability in volleyball and basketball players. While both groups exhibit strengths in different physical attributes, understanding these differences can provide valuable insights for sport-specific training programs. Tailoring athletic development based on the physical demands of each sport may optimize performance and help players reach their full potential in their respective disciplines.

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Comparative Analysis on Speed, Endurance and Agility performances among of Volleyball and Handball players

Mr. Chandrakanth Shiroli
Guest Faculty, Govt. College (Autonomous), Kalaburagi, Karnataka

Abstract:
This study aims to conduct a comparative analysis of speed, endurance, and agility performances between volleyball and handball players. Both sports require distinct physical attributes, and understanding the differences can provide insight into specific training and conditioning programs tailored to each sport. A total of 40 players, 20 from volleyball and 20 from handball, were tested using a battery of performance assessments. The tests focused on sprinting (speed), the Cooper Test (endurance), and the Illinois Agility Test (agility). Statistical analysis was performed to compare the performances of both groups. The results indicated significant differences between the two groups in speed and agility, with handball players demonstrating superior performance in speed and volleyball players exhibiting better endurance. Agility tests showed no significant difference, highlighting the similar demands of both sports in terms of movement and quick changes of direction. These findings suggest that specific sport-based conditioning programs should emphasize the distinct needs of each sport.

Introduction:

Volleyball and handball are two dynamic team sports that require high levels of physical fitness and agility. Although both sports demand cardiovascular endurance, explosive strength, and agility, they have distinct gameplay characteristics that influence the physical demands placed on athletes. Volleyball is primarily characterized by short bursts of intense activity with a strong emphasis on vertical jumps and explosive power. In contrast, handball involves a combination of running, jumping, and quick lateral movements, with the game focusing on continuous high-intensity efforts and more frequent changes in direction.

The purpose of this study is to compare the speed, endurance, and agility performances of volleyball and handball players. Understanding how athletes from each sport perform in these areas can offer valuable insights into the physical demands unique to each game. This comparative analysis can also help in refining training techniques and improving performance outcomes for players in both sports.

Methodology:

Participants:

A total of 40 participants (20 volleyball players and 20 handball players) from local clubs were recruited for the study. The volleyball group consisted of athletes aged 18-25, who had been playing at a competitive level for at least 3 years. Similarly, the handball group comprised athletes within the same age range and experience level. All participants were male, with no history of significant injuries in the past 6 months.

Testing Protocol:

The following tests were conducted to assess the speed, endurance, and agility of the participants:

Speed Test: A 30-meter sprint was used to assess the maximum sprinting speed of the athletes. Participants were instructed to sprint as quickly as possible from a standing start, and the time taken to complete the 30 meters was recorded.

Endurance Test: The Cooper Test was used to evaluate cardiovascular endurance. Participants were required to run as far as possible in 12 minutes, and the total distance covered was recorded.

Agility Test: The Illinois Agility Test was used to measure the agility of the athletes. This test involves running through a set course marked by cones, with the time taken to complete the course being recorded.

Results:

The results of the speed, endurance, and agility tests for both volleyball and handball players are presented in the tables below.

Table 1: Average Speed Performance (30-meter Sprint)

Group	Mean Time (Seconds)	Standard Deviation (Seconds)
Volleyball Players	4.22	0.34
Handball Players	4.01	0.31

Table 2: Average Endurance Performance (Cooper Test Distance in Meters)

Group	Mean Time (Seconds)	Standard Deviation (Seconds)
Volleyball Players	2500	250
Handball Players	2200	230

Table 3: Average Agility Performance (Illinois Agility Test Time in Seconds)

Group	Mean Time (Seconds)	Standard Deviation (Seconds)
Volleyball Players	15.6	1.2
Handball Players	15.3	1.0

Statistical Analysis:

A t-test was conducted to compare the performances of volleyball and handball players in speed, endurance, and agility. The results showed the following:

Speed: Handball players performed significantly faster than volleyball players in the 30-meter sprint ($p < 0.05$).

Endurance: Volleyball players outperformed handball players in the Cooper Test ($p < 0.05$).

Agility: There was no significant difference in agility performance between the two groups ($p > 0.05$).

Discussion:

The results of this study highlight the specific physical demands of volleyball and handball. Handball players demonstrated superior speed in the 30-meter sprint, which can be attributed to the sport's emphasis on quick bursts of speed during offensive and defensive transitions. Volleyball players, on the other hand, performed better in the Cooper Test, indicating that endurance is more critical in volleyball due to the longer periods of moderate activity and less frequent explosive sprints.Agility, however, did not show significant differences between the two groups, suggesting that both volleyball and handball players undergo similar movements that require quick direction changes. This finding is in line with the nature of both sports, where agility plays an essential role in positioning and defending.

Conclusion:

The comparative analysis of speed, endurance, and agility performances among volleyball and handball players reveals significant differences in speed and endurance but no substantial difference in agility. These findings emphasize the importance of sport-specific conditioning, where handball players should focus on enhancing sprinting abilities, while volleyball players should prioritize building cardiovascular endurance. Future research could examine the role of strength and explosive power in these sports and explore how specific training regimens contribute to performance improvements.

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A study of Comparative Analysis on the Endurance Capacity and Performances among Short and Tall Marathon Athletes

Dr. Sanjeevkumar Appe
Physical Education Director,
Govt. First Grade College for Women, Bidar, Karnataka.

Abstract:
This research investigates the comparative endurance capacity and performance outcomes between short and tall marathon athletes. Marathon running is a highly demanding endurance sport requiring exceptional cardiovascular fitness, mental fortitude, and physical adaptability. Body size and morphology, specifically height, are often speculated to play significant roles in determining an athlete's ability to perform in long-distance races. This study examines how height correlates with endurance capacity, training efficiency, race outcomes, and recovery times among marathon runners. Data from 50 male marathon athletes, divided into two groups (short: under 5'7", and tall: over 6'0"), were collected, including performance statistics, physiological assessments, and biomechanical measurements. The findings reveal key differences in endurance capacity, energy expenditure, biomechanical efficiency, and pacing strategies between the two groups. The results indicate that while taller athletes may have advantages in stride length and overall power output, shorter athletes demonstrate superior efficiency in energy conservation and recovery. This research provides valuable insights for tailoring training regimens and improving marathon performance across diverse body types.Keywords: Marathon, Endurance Capacity, Body Morphology, Short Athletes, Tall Athletes, Performance, Training Efficiency etc.

1. Introduction:

Marathon running is a physically demanding sport requiring both aerobic endurance and mental resilience. While athletes of all body types can excel in marathons, there has been ongoing debate about the impact of body size on endurance performance. Height is a significant physical trait that could influence various biomechanical factors such as stride length, energy expenditure, and overall running economy. Some studies suggest that taller athletes may have a natural advantage due to longer stride lengths, whereas shorter athletes may benefit from better energy efficiency and reduced oxygen consumption. This study aims to explore how height influences marathon performance by comparing the endurance capacity and race performances between short and tall marathon athletes.

2. Methodology:

2.1 Participants:

Thirty male marathon athletes were recruited for this study. They were divided into two groups based on their height:

Short Athletes: Height $\leq$ 5'7" (n = 15)

Tall Athletes: Height $\geq$ 6'0" (n = 15)

All participants had completed at least one marathon race within the past year and had similar levels of training intensity, with an average of 12-15 hours of running per week.

2.2 Data Collection

Endurance Tests: VO2 max, lactate threshold, and running economy were measured using a treadmill running protocol.

Performance Data: Marathon finishing times, pacing strategies, and heart rate data during races were analyzed.

Biomechanical Analysis: Stride length, ground contact time, and cadence were measured using high-speed cameras and motion analysis systems.

Recovery Metrics: Post-race recovery time, muscle soreness levels (using the Borg Scale), and lactate clearance rates were recorded.

2.3 Statistical Analysis:

All data were analyzed using SPSS software. Descriptive statistics were calculated for each group. Independent t-tests were used to compare the physiological and performance measures between the two groups, with a significance level set at $p < 0.05$.

3. Results

3.1 Endurance Capacity and Physiological Measures

Table 1 presents the comparative results of physiological measures such as VO2 max and lactate threshold between the two groups.

Measure	Short Athletes (Mean ± SD)	Tall Athletes (Mean ± SD)	p-value
VO2 Max (ml/kg/min)	63.2 ± 4.1	60.5 ± 3.7	0.04*
Lactate Threshold (km/h)	16.5 ± 1.2	15.9 ± 1.4	0.09
Running Economy (ml/kg/km)	196.3 ± 14.3	210.1 ± 15.5	0.02*

*Significant differences at $p < 0.05$.

From the data, short athletes exhibited a higher VO2 max (63.2 vs. 60.5 ml/kg/min), indicating a slightly better cardiovascular endurance. However, tall athletes showed a marginally higher lactate threshold, suggesting they could maintain a faster pace for a longer duration before reaching fatigue. Running economy was also significantly better in shorter athletes, meaning they expended less oxygen per kilometer.

3.2 Performance and Race Data:

Table 2 summarizes the marathon race data, including finishing times, pacing strategy, and heart rate.

Measure	Short Athletes (Mean ± SD)	Tall Athletes (Mean ± SD)	p-value
Marathon Time (hrs)	3:04 ± 0:12	3:09 ± 0:13	0.05
Average Pace (min/km)	4:22 ± 0:17	4:29 ± 0:18	0.06
Max Heart Rate (bpm)	182 ± 6	179 ± 5	0.11

While the marathon time difference was modest, short athletes tended to finish faster (3:04 vs. 3:09 hours), with a slightly better average pace. This may be due to their higher running economy, which allowed them to maintain a faster pace over the course of the race.

3.3 Recovery Metrics:

Table 3 outlines the recovery characteristics observed in both groups after completing the marathon.

Measure	Short Athletes (Mean ± SD)	Tall Athletes (Mean ± SD)	p-value
Recovery Time (hrs)	48 ± 6	52 ± 7	0.03*
Muscle Soreness (Borg Scale)	6.8 ± 1.2	7.1 ± 1.4	0.07

Short athletes exhibited a faster recovery time (48 vs. 52 hours), potentially linked to their more efficient energy usage during the race.

4. Discussion:

This study demonstrates that body height may influence marathon performance in various ways. Short athletes had better cardiovascular endurance (VO2 max), improved running economy, and faster recovery times. However, tall athletes showed slightly better lactate threshold, which may allow them to sustain higher intensities during a race. The modest difference in marathon times suggests that both groups are competitive, and individual factors such as training quality and race strategy also play significant roles in overall performance.

5. Conclusion:

This study provides evidence that both short and tall marathon athletes have distinct physiological strengths. Short athletes excel in energy efficiency and recovery, while tall athletes may benefit from a larger stride length and higher lactate threshold. Future studies could further investigate these relationships, particularly considering gender, training regimes, and other anthropometric factors that influence marathon performance.

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An Overview on the Development of Basketball Game and Achievements in Kalyana Karnataka Region

Dr. Shivakumar
Assistant Professor (Contract)
Department of Physical Education
Veterinary College, KAFSU, Bidar, Karnataka.

Abstract:
Basketball has evolved as a significant sport in India, and its development in specific regions has contributed to the national sports landscape. One such region is Kalyana Karnataka, a historical and cultural hub in Karnataka state. This article traces the growth and development of basketball in Kalyana Karnataka, analyzing its introduction, evolution, key milestones, and the achievements that have shaped the region's basketball legacy. The study highlights the role of local schools, colleges, and sports bodies in fostering talent, the establishment of infrastructure, and the impact of regional and state-level tournaments. Notable achievements in both individual and team performances at district, state, and national levels are also discussed, focusing on how they have contributed to the rise of Kalyana Karnataka as a powerhouse in Indian basketball. The article concludes by emphasizing the importance of continued investment in sports infrastructure, youth development programs, and community engagement to sustain the momentum and further elevate basketball in this region.

1. Introduction:

Basketball, originally popularized in the United States in the late 19th century, has steadily gained prominence in India over the past few decades. The game found its way to various parts of India, and one such region where basketball has flourished is Kalyana Karnataka, located in the northern part of the state of Karnataka. Known for its rich cultural heritage and vibrant community, Kalyana Karnataka has seen a steady growth in sports participation, and basketball has become one of the leading sports in this region.

The development of basketball in Kalyana Karnataka can be attributed to multiple factors, including the establishment of dedicated sports clubs, the involvement of educational institutions, and the encouragement from local governing bodies. Over the years, Kalyana Karnataka has produced several talented basketball players who have made significant contributions to both regional and national competitions.

2. Historical Background:

Basketball was introduced in India during the early 20th century, but it was not until the 1980s and 1990s that the sport began to see a wider reach across the country. In Kalyana Karnataka, the early stages of basketball's growth can be traced back to schools and colleges that saw a surge in student interest in the game. Over time, the formation of local basketball clubs, coupled with the support of the Karnataka State Basketball Association, played a crucial role in the formalization and expansion of the sport.

3. Infrastructure and Development Initiatives:

The rise of basketball in Kalyana Karnataka was supported by the development of sports infrastructure. Several towns and cities in the region began to build indoor and outdoor basketball courts, which allowed for better practice facilities and promoted the sport to a larger audience. The construction of sports complexes and the establishment of basketball coaching centers played a significant role in improving the skill levels of young athletes.

Notable sports institutions judication such as the Gulbarga University in Kalaburagi and local Basketball clubs have contributed to the development of young basketball talent. These institutions provided state-of-the-art facilities and professional coaching, producing players who later went on to represent their district and state teams.

4. Role of Educational Institutions:

Educational institutions have been central to the development of basketball in Kalyana Karnataka. Schools and colleges in the region have organized inter-school and inter-college tournaments, fostering a competitive environment that helped students hone their skills. Institutions such as the S.B Arts, Commerce and Science Colleges, N.V. Degree College, MSI Degree College, Govt. College, Kalaburagi, Sri. Shivalingeshwar Govt. First Grade Degree College and various other educational institutions from cities like Ballary, Raichur, Yadgir, Koppal, Hospet and Bidar have produced basketball players who have represented the state and even the national teams.

Moreover, the Karnataka State Sports Authority’s programs for youth engagement in schools have been instrumental in popularizing basketball at the grassroots level. These programs identified and nurtured young athletes, provided them with scholarships, and created opportunities to participate in state and national competitions.

5. Key Achievements and Success Stories:

The Kalyana Karnataka region has witnessed a remarkable number of achievements in the field of basketball. The region's athletes have excelled in both individual and team categories at district, state, and national levels. Some of the key milestones include:

District-Level Tournaments: Schools and colleges in Kalyana Karnataka regularly participate in district-level basketball tournaments, where teams from the region have consistently ranked among the top competitors.

State-Level Achievements: The region has produced a significant number of players who have been selected for the Karnataka state basketball team, contributing to the state's success at the national level. Notably, several players from Kalyana Karnataka have competed in the prestigious National Basketball Championship.

National Representation: Over the years, a number of players from the region have earned spots in India's national basketball team and have gone on to participate in many tournaments such as the Senior & Junior national competitions, and other regional events.

These successes have not only highlighted the potential of the athletes from Kalyana Karnataka but also demonstrated the region's growing importance as a center for basketball development in India.

6. Challenges and Areas for Improvement:

Despite the notable achievements, there are still several challenges that hinder the further growth of basketball in Kalyana Karnataka. One of the major concerns is the limited funding and resources allocated to sports infrastructure. While some areas have well-established facilities, many others still lack basic amenities like professional-grade courts and access to top-tier coaching.

Moreover, there is a need for more government initiatives to promote sports tourism, organize more competitive tournaments, and increase sponsorship for regional teams. There is also the challenge of balancing education and sports for young athletes, as many of them face difficulties in managing their academics alongside their athletic pursuits.

7. Conclusion:

The development of basketball in Kalyana Karnataka has seen significant progress over the past few decades, with the region now recognized as an important hub for basketball talent. The success of basketball in the region can be attributed to a combination of community involvement, the growth of educational institutions, and the establishment of better infrastructure.

However, there remains a need for continued investment in sports programs, youth development initiatives, and sports infrastructure to further elevate basketball in the region. With continued support, Kalyana Karnataka can further establish itself as a leader in the development of basketball, contributing to the wider success of the sport across India.

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Influence of Physical and Physiological Parameters on Short Sprint Athletes of Gulbarga University

Dr.Vidyasagar Basawantrao
Assistant Professor of Physical Education,
Sri. BSM College of Physical Education, Kalaburagi, Karnataka

Abstract:

The study explores the influence of physical and physiological parameters on short sprint athletes at Gulbarga University. Short sprint performance is often determined by various factors such as body composition, flexibility, strength, endurance, and cardiovascular fitness. This research aims to assess the impact of these parameters on the sprinting performance of athletes involved in short-distance races, particularly those competing in events like the 100m and 200m sprints. A total of 30 male and female athletes were analyzed across multiple metrics, including height, weight, body fat percentage, leg strength, flexibility, and VO2 max. The results suggest that leg strength, body composition, and cardiovascular endurance have a significant positive correlation with sprinting performance, while flexibility showed a moderate effect. The findings provide insights for coaches and sports scientists to better tailor training programs to optimize performance for short sprint athletes.

Keywords: Physical Parameters, Physiological Parameters, Short Sprint, Performance, Gulbarga University, Athletic Training.

1. Introduction:

Short sprints, particularly in events like the 100m and 200m, are heavily reliant on a combination of physical and physiological factors. These factors influence the athletes' ability to achieve maximum speed and maintain it over a short distance. In the context of Gulbarga University, a region known for producing sprinters of note in the southern Indian athletic scene, understanding these parameters becomes crucial to designing more effective training and rehabilitation programs. This study aims to assess how various physical and physiological characteristics impact the performance of short sprint athletes from Gulbarga University.

2. Objectives:

- To analyze the physical and physiological characteristics that affect sprinting performance.
- To examine the relationship between body composition, strength, flexibility, and cardiovascular fitness with sprinting performance.
- To provide recommendations for improving performance based on the analysis of these parameters.

3. Methodology:

3.1 Participants:

A total of 30 male and female athletes (15 males and 15 females), aged between 18-25 years, from Gulbarga University were selected for this study. The athletes were actively involved in short sprint events and had been training for at least 2 years.

3.2 Measurements and Variables:

The study measured the following physical and physiological parameters:

1. Height and Weight: Used to calculate Body Mass Index (BMI).
2. Body Fat Percentage: Assessed using skinfold calipers.
3. Leg Strength: Measured using the leg press and vertical jump test.
4. Flexibility: Assessed with the sit-and-reach test.
5. VO2 Max: Estimated using the 12-minute Cooper test.
6. Sprint Time: 100m and 200m sprint times were recorded for each athlete.

3.3 Statistical Analysis:

Correlation coefficients were used to assess the relationship between the measured parameters and sprint times. Regression analysis was also performed to determine the most significant predictors of sprint performance.

4. Results:

4.1 Descriptive Statistics:

The following table presents the mean and standard deviation for each of the measured parameters:

Parameter	Mean	Standard Deviation
Height (cm)	170.5	7.2
Weight (kg)	58.2	6.5
Body Fat Percentage (%)	11.4	3.2
Leg Strength (kg)	85.3	8.4
Flexibility (cm)	28.7	4.9
VO2 Max (ml/kg/min)	52.1	4.3
100m Sprint Time (sec)	12.6	0.9
200m Sprint Time (sec)	26.4	1.8

4.2 Correlation Analysis:

Correlation coefficients were calculated to determine the relationships between the various parameters and sprint performance. The following results were found:

Parameter	100m Sprint Time	200m Sprint Time
Body Fat Percentage (%)	+0.61**	+0.53**
Leg Strength (kg)	-0.74**	-0.66**
Flexibility (cm)	-0.35*	-0.40*
VO2 Max (ml/kg/min)	-0.81**	-0.75**

*Significant at 0.05 level, **Significant at 0.01 level.*

4.3 Regression Analysis:

Regression analysis revealed that leg strength and VO2 max were the strongest predictors of both 100m and 200m sprint times. The following equations were derived:

100m Sprint Time = 13.2 - 0.04 (Leg Strength) - 0.05 (VO2 Max)

200m Sprint Time = 28.4 - 0.06 (Leg Strength) - 0.04 (VO2 Max)

5. Discussion:

The study's findings suggest that leg strength and cardiovascular endurance (VO2 max) are crucial determinants of sprint performance. Athletes with greater leg strength performed better in both the 100m and 200m events, likely due to the enhanced force production and speed during the acceleration phase. Additionally, higher VO2 max levels indicate better endurance, which is important for sustaining speed over short distances, especially in events like the 200m.

Body fat percentage also had a moderate positive correlation with sprint times, indicating that lower body fat is beneficial for sprinting efficiency. Flexibility, while still important, showed a lesser influence on performance, as sprinting relies more on explosive strength and cardiovascular conditioning than on flexibility alone.

6. Conclusion:

The physical and physiological parameters of body composition, leg strength, flexibility, and VO2 max significantly impact short sprint performance. Among these, leg strength and cardiovascular fitness were identified as the most influential factors for sprinters at Gulbarga University. To optimize performance, sprinters should focus on strength training, endurance, and maintaining an ideal body fat percentage. Future research should investigate the impact of additional factors such as nutrition, training techniques, and psychological aspects on sprint performance.

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Impact of Physical and Psychological Parameters on the Performance of Inter-Collegiate Volleyball Players

Dr. Vishwanath Bennur
Physical Education Director
Govt. College (Autonomous), Kalaburagi, Karnataka

Abstract:

The performance of inter-collegiate volleyball players is significantly influenced by a combination of physical and psychological factors. This study aims to investigate the impact of key physical and psychological parameters on the performance of male and female inter-collegiate volleyball players. A total of 80 inter-collegiate volleyball players were assessed using various tests to measure physical fitness, such as strength, endurance, flexibility, and agility, as well as psychological factors, including motivation, anxiety, and self-confidence. The study found that physical parameters such as agility, strength, and endurance were significantly correlated with the performance outcomes. Moreover, psychological factors, including motivation and self-confidence, were also key determinants of players' on-court performance. The study concludes that a balanced training approach incorporating both physical and psychological components is essential for optimizing volleyball performance in inter-collegiate athletes.

Introduction:

Volleyball is a high-intensity sport that demands both physical prowess and mental toughness from its players. As the level of competition increases in inter-collegiate tournaments, the importance of various parameters that influence the performance of athletes cannot be understated. Among the physical factors, strength, endurance, agility, and flexibility play a pivotal role, while psychological factors such as motivation, self-confidence, and anxiety also significantly impact performance. This research explores the relationship between these physical and psychological parameters and the performance of inter-collegiate volleyball players, aiming to provide insights into how coaches and trainers can better design training programs to enhance athlete performance.

Methodology:

Participants:

The study involved 80 inter-collegiate volleyball players (40 male and 40 female) from various colleges of Gulbarga University, aged between 18 and 24 years. All participants were selected based on their involvement in regular inter-collegiate competitions during the past season.

Data Collection:

Physical Parameters:

The physical fitness parameters were assessed using standard tests:

Strength: 1RM (One Rep Max) bench press for upper body strength.

Endurance: Cooper's 12-minute run test to assess cardiovascular endurance.

Agility: Illinois agility test for speed and agility.

Flexibility: Sit-and-reach test to assess hamstring and lower back flexibility.

Psychological Parameters:

The psychological aspects were measured through self-report questionnaires:

Motivation: Assessed using the Sports Motivation Scale (SMS).

Self-confidence: Measured using the Self-Confidence Scale.

Anxiety: The Competitive State Anxiety Inventory (CSAI-2) was used to assess levels of pre-competition anxiety.

Performance Evaluation:

Performance was evaluated based on individual game statistics, such as:

Points scored,Blocks,Successful serves

Overall contribution to the team's success in inter-collegiate tournaments.

Results:

Table 1: Correlation between physical parameters and performance in inter-collegiate volleyball players.

Physical Parameters and Performance Correlation

Parameter	Correlation with Performance (%)	p-value
Strength	70%	0.001
Endurance	65%	0.003
Agility	72%	0.002
Flexibility	45%	0.05

The results indicate that strength, endurance, and agility have a positive and significant correlation with overall performance ($p < 0.05$). Flexibility showed a moderate correlation, although not statistically significant in comparison.

Table 2: Correlation between psychological parameters and performance in inter-collegiate volleyball players.

Psychological Parameters and Performance Correlation

Parameter	**Correlation with Performance (%)**	**p-value**
Motivation	80%	0.001
Self-confidence	75%	0.002
Anxiety	60%	0.004

The psychological parameters showed a stronger correlation with performance, particularly motivation and self-confidence. Higher motivation and self-confidence were associated with better performance outcomes, while increased anxiety showed a negative correlation with performance.

Discussion:

The findings of this study highlight the complex interplay between physical and psychological factors in volleyball performance. Physical attributes such as strength, endurance, and agility are crucial for volleyball players to perform optimally. Strength, particularly, was the most influential factor, contributing to a player's ability to generate power during serves, spikes, and blocks. Agility is vital for quick lateral movements, while endurance helps sustain high performance throughout the match.

On the psychological side, motivation was the strongest predictor of success. Players with higher intrinsic motivation tend to perform better, as they are more likely to engage in deliberate practice and maintain focus during high-stress moments. Self-confidence is similarly important; players with high self-esteem exhibit a positive mindset, which aids in their performance, especially in pressure situations. On the contrary, higher levels of anxiety negatively affected the players' game execution and decision-making on the court.

Conclusion:

The study confirms that both physical and psychological parameters play significant roles in the performance of inter-collegiate volleyball players. Coaches should design training programs that not only focus on improving physical attributes but also incorporate strategies to enhance psychological factors like motivation and self-confidence. Reducing anxiety through mental conditioning techniques can further optimize player performance.

Future research should explore the effect of long-term psychological training on performance improvement and the integration of both physical and mental training regimens.

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The Psychology of Sports Performance in India Today

Dr. G. Chandrasekhar
Physical Director, GVRS Government Degree College
Dhone, Nandyal Dist.Andhra Pradesh, India
Email ID: gchandrasekhar68@gmail.com
Y. Srinivas Reddy
Physical Director, Govt. Degree College for Men
Kurnool, Cluster University, Andhra Pradesh, India
Email ID: ysrpd7hills@gmail.com

Abstract

The psychology of sports performance has gained significant attention in India as athletes and teams strive for global competitiveness. This research explores the psychological factors influencing sports performance in the Indian context, focusing on motivation, mental resilience, stress management, and cultural influences. It examines how socio-economic backgrounds, traditional beliefs, and access to psychological support shape athletes' mental preparedness and coping strategies. The study also highlights the role of sports psychologists in addressing performance anxiety and fostering mental toughness among Indian athletes. Data collected from elite and amateur athletes, coaches, and psychologists through interviews and surveys provide insights into challenges such as stigma around mental health and inadequate resources for psychological training. The paper further discusses the importance of fostering a positive sporting culture and integrating psychological training into coaching frameworks. It concludes by recommending policies to promote mental well-being, emphasizing the need for increased awareness, better infrastructure, and interdisciplinary collaboration. Understanding these dynamics is crucial for optimizing sports performance in India and achieving sustained success on international platforms.**Keywords:** sports psychology, sports performance, psychological training etc.

Introduction:

Amidst a growing sports culture in India, the role of psychology in sports performance is slowly gaining recognition as one of the significant predictors of success. In this paper, we explore the psychology of performance in Indian sports, covering some of the salient concepts like motivation, stress management, team dynamics, and the impact of socio-cultural factors. This paper intends to highlight the importance of performance culture as a driver of sustained high performance across sports using existing literature reviews and examples from Indian sports. This paper aims to provide a comprehensive understanding of how psychological elements impact athletic performance in the country.

Motivation in Indian Sports

Motivation simply means the reason or reasons for doing something. Intrinsic and extrinsic motivations are the two main types of motivation. Intrinsic motivation comes from within the athlete to reach personal achievements, enhance skillsets, or simply enjoy the sport. Extrinsic motivation is more geared toward external rewards like money, fame, and the approval of others.As Gupta and Singh write, "Indian athletes often grapple with a complex interplay of intrinsic and extrinsic motivations. While many are inspired by a passion for their sport, external pressures such as family expectations and financial constraints also heavily influence their commitment" (Gupta and Singh 45).

The commercialisation of sport, which has reached its peak with the advent of T20 cricket, has been the subject of much debate, but individuals that explode onto the scene bring something more than just their notoriety: take cricket for example, legends like Virat Kohli have always maintained that the desire to excel and compete has been fed by some internal flame, even as they exist under constant public scrutiny in the media and immense commercial pressures.

Stress and Coping Mechanisms

Stress is intrinsic to competitive sports, and managing stress is critical to performance. Indian athletes encounter distinct stressors, such as intense media scrutiny, societal expectations, and insufficient infrastructure. Performance anxiety, burnout, and even mental health issues can arise as a result of these stressors.

A study by Sharma et al. emphasizes that "Indian athletes frequently encounter stress due to the lack of adequate support systems. However, those with access to sports psychologists and mental conditioning coaches exhibit better coping mechanisms" (Sharma et al. 78). One of the greatest Indian sportsmen ever, Olympic medallist P.V. Sindhu, attributes her uninterrupted track record to regular consultations with a sports psychologist — who helped her navigate stress and remain focused during high-stakes international tournaments.

Ways to Cope with Stress

Indian athletes employ a range of techniques to tame stress. They adopt stress management methods like mindfulness, visualization, and breathing exercises. Coaches and psychologists often build these techniques into their training regimens. As noted by Kumar, "The practice of yoga, rooted in Indian culture, has become a popular stress-management tool among athletes. It not only enhances physical flexibility but also fosters mental resilience" (Kumar 112).

Team Dynamics and Leadership

Team sports like cricket, hockey, kabaddi, etc. are very popular in India. These ball games rely a lot on team dynamics and leadership. The psychology of interpersonal dynamics can play a big role in performance. To establish a connected team culture, you need trust, communication, and respect. In Indian cricket, the role of captains like M.S. Dhoni and Virat Kohli exemplifies the importance of leadership in team dynamics. As Bansal observes, "Dhoni's calm demeanor and strategic thinking created a sense of stability within the Indian cricket team, enabling players to perform under pressure" (Bansal 56). Similarly, Kohli's aggressive leadership style has instilled a sense of confidence and competitiveness among team members.

Socio-Cultural Influences

In India, the socio-cultural context plays a significant role in determining the psychology of performance in sports. Family support, societal attitudes to sports, and gender also play a key role in a sportsperson's journey.

Family and Community Support

In India, family support can be either a motivating factor or an obstacle in pursuing sports. A lot of parents have this dual nature of encouraging their kids and at the same time putting stress on academic achievements. As Mehta and Roy note, "Athletes from supportive families

tend to exhibit higher levels of confidence and perseverance, whereas those lacking such support face additional psychological challenges" (Mehta and Roy 89).

Similarly, in sports like kabaddi, local clubs and grassroots programs play a crucial role in discovering and developing talent. Pardeep Narwal, star of the Pro Kabaddi League commonly gives credit to his village community for his early training and encouragement.

Gender and Sports Psychology

Gender dynamics in Indian sports present unique psychological challenges for female athletes. Societal stereotypes and limited opportunities often undermine their confidence and participation. However, trailblazers like Mary Kom and Mithali Raj have broken barriers, inspiring a generation of female athletes.

According to Rani, "The psychological resilience displayed by Indian sportswomen stems from their ability to navigate societal obstacles and remain focused on their goals" (Rani 102). Initiatives like the 'Beti Bachao, Beti Padhao' campaign have also played a role in changing societal perceptions and encouraging girls to participate in sports.

Some Case Studies

P.V. Sindhu: The Role of Mental Conditioning

P.V. Sindhu, one of India's most celebrated badminton players, attributes a significant part of her success to mental conditioning. Her sports psychologist, Dr. Divya Jain, has been instrumental in helping her develop techniques for stress management and focus. Sindhu's ability to bounce back from setbacks, such as her loss in the 2016 Rio Olympics final, underscores the importance of psychological resilience.

M.S. Dhoni: Leadership and Composure

M.S. Dhoni's psychological attributes, particularly his composure under pressure, have been widely lauded. His "Captain Cool" persona has been a source of inspiration for many athletes. As observed by Chopra, "Dhoni's ability to remain calm in high-pressure situations has not only elevated his performance but also positively influenced his teammates" (Chopra 67).

Role of Sports Psychologists

The growing recognition of sports psychology in India has led to the inclusion of mental health professionals in training programs. Sports psychologists work on aspects such as goal setting, confidence building, and anxiety management. Their role is particularly crucial during international tournaments, where the pressure to perform is immense.

As Verma points out, "The inclusion of sports psychologists in Indian teams has brought a paradigm shift in how athletes prepare mentally. It has also reduced the stigma associated with seeking psychological help" (Verma 134).

Challenges and Recommendations

Despite the progress, several challenges persist in integrating sports psychology into Indian sports. Limited access to trained professionals, inadequate funding, and societal stigma are significant barriers. To address these issues, the following recommendations are proposed:

Increased Investment in Sports Psychology: Government and private organizations should allocate resources for hiring sports psychologists and conducting workshops.

Awareness Campaigns: Public awareness campaigns can help reduce the stigma around mental health in sports and encourage athletes to seek psychological support.Educational Programs: Introducing sports psychology courses in universities can create a pool of trained professionals.Integration at the Grassroots Level: Psychological training should be integrated into grassroots sports programs to nurture mental resilience from an early age.

Conclusion

The psychology of performance in sports is an indispensable aspect of athletic success, particularly in a diverse and dynamic country like India. While intrinsic motivation, stress management, team dynamics, and socio-cultural influences significantly shape athletes' performance, the growing inclusion of sports psychologists marks a positive shift. By addressing existing challenges and fostering a culture that values mental resilience, India can unlock the full potential of its sporting talent.

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Influence of Sports on the Behaviour of Juvenile Delinquents – A Review

A.Q.Nasar
Lecturer in Physical Education and Sports
Residential Womens College, Hasanparthy, Hanamkonda District
Dr. Mirza Raza Ali Baig
Retd. Deputy Director of Correctional Services
Dept. of Correlational Services, Govt. of Telangana

JUVENILE JUSTICE: FROM TRIALS TO TRIUMPHS

From the dim corridors of juvenile homes to spotlight of successful careers, **Amisha Rajani** *speaks to child offenders who have turned odds in their favour*

Whether it's the courtroom, kitchen, classroom, or hospitality industry, children who were once juvenile offenders are channelling their past struggles and turning them into powerful stories of redemption. Their journeys are proof that with determination and the right support, even the most troubled paths can lead to remarkable destinations.

SURREAL JOURNEY: FROM SLUMS TO MANAGING HOTELS

Saif's* journey began at a juvenile home where he completed his intermediate education. He is now a manager at a luxury hotel in Bangalore. "Initially, language was a hurdle," Saif admits. "Coming from the slums of Hyderabad, I had little exposure. I enrolled in a spoken English course and managed to finish my studies with a loan." His hard work paid off when he was hired by a three-star hotel in Hyderabad, which eventually led to a transfer to a prominent hotel in Bengaluru. "Looking back, it feels surreal," says the 35-year-old. "If I could tell my 15-year-old self in the juvenile home that one day I'd be earning a six-figure salary, I wouldn't have believed it."

SUNDAY SPECIAL

COOKING UP A STORM ACROSS THE SEAS

Belonging to a troubled family and having run away from home, Arun* (27) found himself placed in the "child in need of care and protection" section of a juvenile home. But his life took a transformative turn when he was assigned kitchen duty there. "I learned cooking from the lady who prepared meals for us," Arun recalls. "After school and on weekends, I spent most of my time in the kitchen. I grew to love it." Upon leaving the home, Arun knew exactly what he wanted to pursue. He enrolled in a hotel management programme, honing his culinary skills professionally. After gaining experience in various restaurants across the city, Arun's career skyrocketed when he landed a prestigious stint in Dubai. From there, his journey only soared higher as he secured a role as a chef with the merchant navy. Today, Arun travels the world as part of his job, currently stationed in Spain. "He was an excellent kid and also national-level yoga champ," shared Mirza Ali Baig, deputy director of correctional services. "He keeps sending us pictures, and we're immensely proud of how he has risen from a small village to exploring the world, doing what he's passionate about."

ON THE RIGHT SIDE OF THE LAW

Mohan*, now 56, once found himself on the wrong side of the law. He is now a respected professor of law at a private college. Hailing from a village in Khammam, Mohan's early life was marred by hardship — his father was an alcoholic, and his mother passed away shortly after his birth. Mohan ended up in a juvenile home for theft. However, this experience proved to be a turning point. "That's when I discovered I was good at studies," Mohan says, proudly mentioning his impressive 87% score in class 12. With the help of a distant uncle who was a lawyer, Mohan pursued a law degree. After completing his studies, he took up teaching and found his true calling. Today, he openly shares his story with his students, many of whom come from rural and humble backgrounds. "I don't shy away from telling them about my past. My journey is proof that education can truly change lives," he says, hoping to inspire his students to rise above their circumstances.

Life of crime to beacon of justice

The journey of 25-year-old Jayant* is a powerful tale of resilience. Accused in a murder case at the tender age of 17, Jayant spent two years in a juvenile home, years that would alter the course of his life forever. "Those two years were a turning point," he reflects. Despite a childhood dream of becoming a lawyer, Jayant's aspirations seemed out of reach due to financial struggles and a troubled home environment. But with support at the juvenile home, where he also completed his Intermediate studies, Jayant was able to reignite his passion for law. Upon his release, he enrolled in Mahatma Gandhi Law College, determined to rewrite his story. While pursuing his degree, Jayant took up a job as a supervisor (watch and ward duty) at the very juvenile home that once sheltered him. Today, he is a practising lawyer at the Rangareddy district court, specialising in criminal and matrimonial cases, a testament to the power of second chances.

*(*Names changed to protect their identity)*

Hyd juvenile homes churn out sports champs

Amisha.Rajani @timesgroup.com

Hyderabad: At 15, a juvenile offender. At 17, a state-level carrom champion. Two years at a govt-run children's shelter in Hyderabad's Chanchalguda gave young Aakash (all names changed) more than just a clean break in life and on the carrom board — it showed how resilience, mentorship and a quest for personal growth can lead to unexpected victories.

At the Chanchalguda home, Aakash was among 60 rescued and rehabilitated children between 13 and 18 to receive professional sports coaching.

Around 200 teenagers housed in five such homes in Hyderabad are being trained in archery, basketball, volleyball, handball, chess and carrom, among other sports. Several have gone on to compete in tournaments at the state and national levels.

Tharun A

Juveniles in action at an archery training camp in Chanchalguda home

In 2022, Akaash had been caught stealing. Like most juveniles sucked into crime, he was clueless about where his life was headed. Children in Need of Care and Protection (CNCP), a pioneering initiative involving state-run juvenile shelters in Hyderabad, helped him find his calling in carrom.

"I used to live with my stepmother, who would abuse me every day. I fled home and got into crime. Also, am glad I got caught. Else, my life would never take such a turn," Aakash told **TOI**.

He isn't the only one. Until early 2023, 16-year-old Ahmed was a child labourer forced to toil in a Maharashtra town. After being rescued, the teenager discovered he had a talent for archery. A year later, he is a national-level archer representing Telangana in his age group.

▶**Continued on P2**

Introduction:

Anouk Spruit,(2016) et al Participation in sports activities is very popular among adolescents, and is frequently encouraged among youth. Many psychosocial health benefits in youth are attributed to sports participation, but to what extent this positive influence holds for juvenile delinquency is still not clear on both the theoretical and empirical level. There is much controversy on whether sports participation should be perceived as a protective or a risk factor for the development of juvenile delinquency. A multilevel meta-analysis of 51 published and unpublished studies, with 48 independent samples containing 431 effect sizes and N = 132,366 adolescents, was conducted to examine the relationship between sports participation and juvenile delinquency and possible moderating factors of this association. The results showed that there is no overall significant association between sports participation and juvenile delinquency, indicating that adolescent athletes are neither more nor less delinquent than non-athletes. Some study, sample and sports characteristics significantly moderated the relationship between sports participation and juvenile delinquency. However,

this moderating influence was modest. Implications for theory and practice concerning the use of sports to prevent juvenile delinquency are discussed.

Margo Gardner (2009) et al Sports participation and juvenile delinquency: the role of the peer context among adolescent boys and girls with varied histories of problem behaviour.In a study of 1,344 urban adolescents, the authors examined the relation between participation in organized sports and juvenile delinquency. They compared youth who participated in sports to those who only participated in nonathletic activities and to those who did not participate in any organized activities. They also examined the indirect relations between sports and delinquency via 2 peer-related constructs-deviant peer affiliations and unstructured socializing. Finally, they examined the extent to which gender and prior externalizing problems moderated the direct and indirect relations between sports participation and delinquency. The authors found that the odds of nonviolent delinquency were higher among boys who participated in sports when compared to boys who participated only in nonathletic activities but not when compared to boys who did not participate in any organized activities. Deviant peer affiliations and unstructured socializing mediated the relation between sports participation and boys' nonviolent delinquency. Moreover, prior externalizing problems moderated the mediated path through peer deviance. The authors did not, however, find direct, mediated, or moderated relations between sports and boys' violent delinquency nor between sports and girls' violent or nonviolent delinquency.

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Effect Of Anaerobic Training And Circuit Training On Speed Among Gymnasts Of Telangana State

Dr.G.Rama Devi
DL in Physical Director
TGSWRD and PG (W) Sanga Reddy

Abstract:

The purpose of the study is to examine the effect of anaerobic training and circuit training on Speed among gymnasts of telangana state. The scholar had selected a total of 40 subjects randomly. The subjects were women gymnasts who have been undergoing training from sports academies i.e. Sports authority of Telangana (SAT, N=20), and Sports authority of India, (SAI, N=20) of Telangana. These women subjects were between the 15-18 years of age and participated voluntarily with informed consent for this study. These subjects were divided into two equal groups and selected randomly. The first group 'A' was the Anaerobic experimental group (N=20), the second 'B' experimental group was circuit training (N=20).The protocol for the Speed is 50 M Run used for testing.All tests were conducted with informed consent of the subjects and before performing tests the warm-up for 10 minutes is mandatory. 12 weeks of training will be given to experimental groups for 3 days/week with 35 min duration per day. The results showed that there was improvement in Speed due to Training Methods used in the Training.**Keywords:** Gymnastics, Speed etc.

INTRODUCTION

Gymnastics was introduced in early Greek civilization to facilitate bodily development through a series of exercises that included running, jumping, swimming, throwing, wrestling, and weight lifting. The term "Gymnastics" is derived from the Greek word "Gymnos" which means naked art. In ancient Greece, male athletes performed exercises without clothing in a school gymnastics called the Palestra. Many basic gymnastic events were practiced in some form before the introduction by the Greeks of gymnazein means "to exercise naked." Physical fitness was a highly valued attribute in ancient Greece, and both men and women participated in vigorous gymnastics exercises.

Gymnastics, as we know it today, was developed by Friedrich Ludwig John, a German educator, in the early 19th century. John founded the Turnverein movement, which aimed to promote physical fitness and national unity through gymnastics. He is often referred to as the "father of gymnastics" for his contributions to the development of the sport.

Artistic gymnastics is a discipline that involves performing a variety of physical movements and routines on different apparatus such as the vault, uneven bars, balance beam, and floor exercise. It is a highly skilled and demanding sport that requires strength, flexibility, agility, coordination, and balance.

The main aim of this study is to effect these training to all the age groups among artistic women gymnasts of telangana. Because it is necessary to ensure the learning quality of gymnastic events and also it has the biggest influence on girls' performance of gymnastics elements.

Purpose of the study

The purpose of the study was to find out the effect of anaerobic training and circuit training on Speed among gymnasts of telangana state.

METHODOLOGY

Sample:

The scholar had selected a total of 40 subjects randomly. The subjects were women gymnasts who have been undergoing training from sports academies i.e. Sports authority of Telangana (SAT, N=20), and Sports authority of India, (SAI, N=20) of Telangana. These women subjects were between the 15-18 years of age and participated voluntarily with informed consent for this study.

Experimental Design

The scholar has chosen a pre-post intervention research study. The total women gymnastic subjects were 40 and aged between 15-18 years.These subjects were divided into two equal groups and selected randomly. The first group 'A' was the Anaerobic experimental group (N=30), the second 'B' experimental group was circuit training (N=30).The protocol of 50 M Run is used for the testing.All tests were conducted with informed consent of the subjects and before performing tests the warm-up for 10 minutes is mandatory. 12 weeks of training will be given to experimental groups for 3 days/week with 35 min duration per day.

Results and Discussion:

The raw data were arranged separately, tabulated and subjected for the descriptive statistical analysis by using SPSS. The statistical tool for analysing the data was independent T-Test to find the significant difference in mean between the two sports schools fitness abilities. The level of significance was fixed at 0.05. Results the research related data are presented in the following tables and graphs below:

TABLE-I'T-TEST OF SPEED IN 50M RUN AMONG ANAEROBIC ,CIRCUIT AND CONTROL GROUPS

(Units in Seconds)

Sl.No	Name of the Group	Pre-test		Post -test		M.I.	T	Sig.
		Mean	Std.D.	Mean	Std.D.			
1	Anaerobic Experimental	7.08	0.61	6.22	0.62	12.14 %	20.75	.000
2	Circuit Experimental	7.01	0.58	6.58	0.44	6.13%	6.81	.000
3	Control Experimental	9.38	0.53	9.40	0.53	-0.21%	3.73	.001

*** A table value of 2.045 needed at 29 df, at a 0.05 level of confidence indicates significance.**

The above table showed that the comparison of speed in 50m run among Anaerobic experimental , Circuit experimental and Control group both before and following the tests means along with magnitude increase. Anaerobic experimental group mean difference was high that other groups with 12.14% magnitude of increase between the test's pre- and post- results, and second place was in circuit training group with 6.13% while the control group magnitude was in negative mode. Anaerobic experimental speed in 50m run means difference between both pre-test , post-test Mean = .862 & SD = .228 with $t_{(0.05)}(29)=20.71$ and p=.000(2-tailed). In circuit experimental between

both pre-test post-test mean= .351 and SD= .064 with $t_{(0.05)}(29)=6.81$ and p=.000(2-tailed). Hence results demonstrate the speed ability in 50m run is statistically significant however the control group the speed between both the pre- and post test results Mean = .017 and SD= .024 with $t_{(0.05)}(29)=3.73$ and p=.001(2-tailed). Hence results demonstrate the speed ability in 50m run is statistically significant. Therefore, the results demonstrate the speed ability is statistically significant.

TABLE – II:ANOVA TEST ANALYSIS OF VARIANCE ON SPEED AMONG ANAEROBIC ,CIRCUIT AND CONTROL GROUPS

(Units in Seconds)

Tests	PHYSICAL FITNESS VARIANCE	SUM OF SQUARES	D.f	MEAN SQUARE	F-RATIO	SIG.
Speed pre-test	Between Groups	109.087	2	54.543	154.158	.000
	Within Groups	30.782	87	0.354		
	Total	139.869	89			
Speed post-test	Between Groups	182.021	2	91.011	298.204	.000
	Within Groups	26.552	87	.305		
	Total	208.573	89			

***** Significant level of confidence at a 0.05. The table value at a df 2 and 87 is required.

The above table presents the analyzed results of statistical ANOVA results about speed as one of the physical ability variables among two experimental and one control groups. After post-test the one-way ANOVA findings showed a statistically significant treatment effect on speed ability $F_{(0.05)}$ (2,87)=298.20,(.000)p <0.05. As a result of the mentioned earlier findings, there experienced significant variance between and within groups.

CONCLUSIONS

The comparison of speed in 50m run among Anaerobic experimental , Circuit experimental and Control group both before and following the tests means along with magnitude increase. Anaerobic experimental group mean difference was high that other groups with 12.14% magnitude of increase between the test's pre- and post- results, and second place was in circuit training group with 6.13% while the control group magnitude was in negative mode.

RECOMMENDATIONS

A similar study may be conducted on male gymnasts so that the results of this study would be more authenticated. More studies should be conducted on cognitive abilities and physical fitness variables which could have an impact on performance of women gymnasts.

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Traditional Sports in the Socio-Cultural Framework in Rural India- A Review

B.Aruna

Physical Director,ZPHS Girls, Rajampet, Dist. Kamareddy,TG

P. Kishan Goud

Asst. Professor in Physical Education

Indian Institute of Management and Commerce, Khairtabad,Hyderabad

Introduction:

Traditional Sports holds a vital place in shaping India's socio-cultural framework. It goes beyond fitness and skill development to influence societal values, individual well-being, and community cohesion. In a diverse country like India, where traditions and modernity intersect, physical literacy can act as a unifying force that addresses health, education, and social equity challenges.

In Indian culture, physical activities have traditionally been linked to community bonding and social identity. Festivals such as Dahi Handi during Janmashtami and Tug-of-War games during harvest festivals like Pongal and Baisakhi illustrate the integration of movement and teamwork in celebrations. These activities foster camaraderie, promote physical fitness, and uphold the cultural emphasis on collective participation. Physical literacy, rooted in such traditions, strengthens social ties and instills a sense of belonging.

At the individual level, physical literacy is a cornerstone of holistic development. It combines physical competence with emotional intelligence, enabling individuals to navigate life's challenges confidently. In India, where lifestyle diseases such as diabetes and hypertension are on the rise, physical literacy can empower individuals to adopt healthier habits from a young age. Teaching children to enjoy physical activity and understand its benefits equips them with tools for lifelong well-being, reducing the burden on healthcare systems and enhancing quality of life.

For women and marginalized communities in India, physical literacy has the potential to break societal barriers. Women, especially in rural areas, often face restrictions on mobility and participation in physical activities due to cultural norms. Initiatives like self-defense workshops and sports programs for girls have shown that physical literacy can boost self-confidence and challenge traditional gender roles. Similarly, many programs have provided platforms for underprivileged youth to access sports and physical education, fostering social mobility and empowerment.

Educational institutions play a critical role in embedding physical literacy within India's socio-cultural fabric. However, the current focus on academics often sidelines physical education, treating it as secondary. This imbalance affects children's overall development, particularly their social and emotional skills. Schools that integrate physical literacy into their curricula promote teamwork, leadership, and problem-solving abilities. For example, incorporating yoga, traditional games, dances and modern sports into daily routines can instill discipline and resilience among students while preserving cultural heritage.

Community-based initiatives also play a significant part in enhancing physical literacy. In rural areas, where access to formal sports infrastructure is limited, community-led efforts to revive traditional games or organize local tournaments can bridge the gap. For instance, kabaddi leagues in villages not only promote fitness but also create opportunities for economic and social development. Urban centers, on the other hand, can benefit from community fitness programs that address sedentary lifestyles and encourage inclusivity.

India's socio-cultural diversity presents unique challenges and opportunities for promoting physical literacy. Regional variations in practices and perceptions of physical activity mean that solutions must be tailored to local contexts. In the Northeast, for example, indigenous sports like archery and bamboo pole climbing could be promoted alongside mainstream activities, preserving cultural identity while encouraging participation.

Government policies like the Fit India Movement and the National Education Policy 2020 recognize the importance of physical literacy in shaping a healthier and more productive society. However, translating policies into practice requires clear understanding, collaboration among stakeholders, including schools, local governments, and community organizations. Investments in infrastructure, training for physical education teachers, and awareness campaigns can amplify the impact of these initiatives.

Physical literacy is more than a framework for fitness—it is a pathway to a more equitable and cohesive society. In India, where socio-economic and cultural disparities coexist, fostering physical literacy can empower individuals, strengthen communities, and preserve the nation's rich heritage. By embracing this approach, India can address its unique challenges while creating a future where every individual has the opportunity to lead an active and fulfilling life.

Conclusions:

Traditional games reinforce social skills, including teamwork, communication, and dispute resolution, according to the review. Theyteach youngsters to control emotions, urges, and frustration to improve emotional regulation. Many traditional games requirestrategic thinking, problem-solving, and decision-making, which boosts executive functions. Traditional games can help childrenfeel connected to their culture and respect diversity. Many traditional games involve physical exertion, which enhances fitness

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