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SPORTS ACHIEVEMENT OF VIKRAM AWARDEE DEEPA VERMA VOLLEYBALL PLAYER

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ABSTRACT

The main purpose of study was to explored the sports achievement of Vikram Awardee Deepa verma volleyball player. The present study was designed to investigate the achievements of M. P. State Volleyball player towards the promotion of Volleyball game in their own state and India in general and also to study their philosophy with regard to sports as a profession in India, their quality as a player and their contribution to Volleyball at national and international level. Data for this investigation was derived from the Primary sources i.e. direct observation, Questionnaires, Personal records, Documents, Pictorial records and Secondary sources. Based on the objectives laid down in the present the following methods were used to obtain the data. The present study was conducted on Deepa verma Vikram Awardee in Volleyball of M.P. State who represented M.P. volleyball team at National and International level. Based on the findings the analysis of data and interpretation of results are presented. This study is regards to Deepa verma for a lot of achievements in volleyball in India. Researcher concluded that Deepa Verma has participated in various levels of volleyball tournaments from their childhood i.e. Junior and senior National levels, All India Interunibersity level, National Women festival and National Schools Games, Deepa Verma has conducted sports camps in various games and sports. After joining govt.woen college as a sports officer, She had produced more the one hundred women players in different games and sports, whose were taken part part from state to National level sports competitions.

Keywords: Award, sports, Achievement, National, championships

1. INTRODUCTION

The ideal synthesis of theory and practice is found in physical education. It is half theoretical and half practical. Practical in this context refers to all sports, including athletics, combat games, adventure games, aquatic games, major games, ball and rocket games, recreational games, etc. One of the forty-four games available is volleyball.

Volleyball has captured the hearts and minds of millions of people worldwide with its exhilarating moments, lightning-fast action, and calculated plays. In the late 19th century, it was developed as a recreational activity by fusing elements of handball, baseball, basketball, and tennis. With time, it evolved into a highly competitive sport that participants of all ages and skill levels appreciated.

Volleyball's fundamental rules state that two teams, separated by a net, compete to score points by placing the ball on their opponent's court while preventing their own team from doing the same. Because of its unique blend of athleticism, skill, and teamwork, volleyball stands apart. Players must show agility, speed, and coordination when diving, spiking, blocking, and setting the ball in their constant pursuit of victory.

Beyond its strenuous physical requirements, volleyball is a strategy and mental toughness game. Teams carefully consider how to set up, predict how their opponents will move, and carry out their plans. With every serve, pass, and spike, the goal is to outwit the opposition and take command of the game.

Volleyball crosses boundaries and cultural divides, bringing people together in the spirit of goodwill and sportsmanship from the sandy beaches of California to the busy arenas of Olympic tournaments. Its contagious intensity and spirit of competition continue to inspire generations of athletes worldwide, whether they play for fun or as a career.

We set out to investigate the nuances, background, and appeal of volleyball in this introduction—a sport that perfectly captures the beauty of athleticism, the thrill of competition, and the joy of teamwork.

India's volleyball history is one of perseverance, growth, and the never-ending pursuit of excellence. In the early 1900s, volleyball was initially brought to the Indian subcontinent and quickly gained popularity as a recreational sport in colleges and institutions. However, because of grassroots initiatives and fervent participation, its popularity surged rapidly

When volleyball began to gain popularity among sports groups and those who loved physical education in the early 1920s, it was first established formally in India. Eleven The VFI (Volleyball Federation of India) was established in 1951, marking a significant turning point in the history of the game by providing a controlled environment for its expansion and development across the nation.

In the decades that followed, volleyball in India saw both successes and setbacks. Thanks to the enthusiasm and commitment of players, coaches, and administrators, the sport saw a rise in grassroots involvement. Indian teams started to establish themselves on the world scene by competing at both the regional and international levels and displaying their talent and tenacity.

The men's national team's victories in the 1980s, including gold at the 1986 Asian Games in Seoul, South Korea, were among the pivotal occasions in the history of Indian volleyball. This remarkable accomplishment raised volleyball's national profile and motivated a new generation of players to strive for sport greatness.

The volleyball community in India persevered in the face of financial hardships, infrastructure constraints, and logistical challenges because of a common dedication to the expansion and improvement of the sport. In order to develop new talent and bring the sport to

far-flung areas of the nation, grassroots projects, talent identification programmes, and coaching seminars were essential.

Brar et.al.(2010) studied the biography of Padamshri Charanjit Singh Captain of Indian hockey team. The Various published Articles, photos and newspapers for the purpose of research and in the form of secondary source the contribution of 100 coaches, players and phycial education expert were included in it by taking their on views. Shree Charanjit Singh had played in 1964 Tokyo Olympic. Rahee and Bala (2012) studied biography, sports achievements and philological competencies of Dhanraj Pillai, who was the Indian Hockey player. The primary and secondary sources, mental toughness, emotional intelligence were studied through standard questioners. Yadav and Kumar(2012) studied the sports achievements of padam shri sankar lakhman, who was the Indian hockey player. The primary and secondary sources, were used for the purpose of studies. opinon rating scale was used for this research. Kumar(2013) Studied the biography of Yogeshwar dutt, who was the browns medal winner in Olympic games in restyling , internal rating interviewee method and opinion was used to collect the individual record. Dutt and singh (2018), studied the biography , sports life and contribution of Arjun awardee Shri Dinesh Khanna in badminton he had represented india in Ashian badminton competition held at Lacknow in 1964. Prasad and Dhapola (2017) studied the Indian Hockey Player Shri syaiyad ali , a Dhyanchand awardee through primary and secondary sources. Singh(2017), Studied the contribution of a famous Hockery player of india Shri Sardar Singh. Shukla and peter(2018), studied the biography of Bhishan singh bedi, a padam shree awardee in cricket through interview and opinion rating Scale. Sandeep(2021), conducted a study on shree Surender singh sodhi through primary and secondary

The main purpose of study was to explored the sports achievement of Vikram Awardee Deepa verma volleyball player.

2. METHODOLOGY

The present study was designed to investigate the achievements of M. P. State Volleyball player towards the promotion of Volleyball game in their own state and India in general and also to study their philosophy with regard to sports as a profession in India, their quality as a player and their contribution to Volleyball at national and international level.

Data for this investigation was derived from the Primary sources i.e. direct observation, Questionnaires, Personal records, Documents, Pictorial records and Secondary sources. Based on the objectives laid down in the present the following methods were used to obtain the data.

3. ANALYSIS OF DATA AND INTERPRETATION

The present study was conducted on Deepa verma Vikram Awardee in Volleyball of M.P. State who represented M.P. volleyball team at National and International level. Based on the findings the analysis of data and interpretation of results are presented in the following way.

3.1 Education

Deepa Verma was the resident of Jabalpur M.P. She was born on 12 November, 1966 in Jabalpur city of Madhya Pradesh. . Smt. Pushpa verma was mother of her and a sports officer in Govt. Girls College, Jabalpur and Shri. B. S. Verma was the Father of her and a Professor in Govt college , Damoh, District Sagar situated in M. P. State . She was the national level Volleyballplayer and national level athletic Player. She has participated in various National and Interuniversity levels volleyball Championships since from 1981 to 1991 repeatedly. .Her higher level of sports achievement was participation in Pre-asiad competition and reciepant of Vikram Award of M.P..She practiced Volleyball of 04 hours daily in the morning and evening session. Her spors journey was statrted in the age of 12 years when she was studying in a school.

3.2 Sports Journey

She has participated seventeen times in National Volleball Competitions held in Calcutta, Delhi, Bhopal, Faridabad, Guntur, Kanpour, Banglore, Bhillai, Trivendraum, Gwalior, Ahemdabad, Poona etc Deepa Verma has been participated in national school games and Junior National Championship in 2008 held at Calcutta; Senior National Championships in 1981; held at Faridabad; National sports festival for women in 1979 held at Calcutta; and Inter-university Volleyball tournament during the session 1984-85 held at Maysore in the game of Volleyball. Deepa Verma was the Captain of First . Indian University woment olleyball team during the session 1988-89. She has attended National coaching camp of Indian University woment olleyball team during the session 1987-88 and 1988-89 contineously. She was the reciepent of Vikram Award of M.P. Govt. in the year 1983-84 in the game of volleyball. Deepa verma has represented M.P.in Pre-Asiad competition in 1982 held at Delhi.. She has also participated in 26th Senior National Ahletic Championships in 1988 held at Jabalpur (M.P.). Deepa verma has been a player in game of Kho-Kho, Kabaddi, Basketball, Tennis, Aerobic, Judo, Karate, Yoga along with Volleyball at Divisional level. She continued to dominate the volleyball game at every stage from junior to senior national championship and inter-university championships. He participated in a number of competitions with the help and support of his father and his brother. Deepa Verma got his first job as a Sports Officer through PSC in Vijaya Govt. Girls Post-graduate College, Murar Gwalior (M.P).in 1994. Deepa verma has been president of student union Rani Durgawati university in the year 1987-1988. He worked hard to become successful and raise the standard of volleyball in India. All the acievement has presented from Table 1 to .7

TABLE 1
SHOWING THE JUNIOR NATIONAL LEVEL ACHIEVEMENTS OF DEEPA VERMA IN VOLLEYBALL

S.No.	Competition	year	Venue	Achievement
1	Junior National Championships	1980	Hoogly	Participation
2	Junior National Championships	1981	Kanpur	Participation
3	Junior National Championships	1987	Trivendrum	Participation

TABLE 2
SHOWING THE SENIOR NATIONAL LEVEL ACHIEVEMENTS OF DEEPA VERMA IN VOLLEYBALL

S.No.	Competition	year	Venue	Achievement
1	Senior National Championships	1981	Faridabad	Participation
2	Senior National Championships	1982	Bhopal	Participation
3	Senior National Championships	1983-84	Guntoor	Participation
4	Senior National Championships	1985	Kanpur	Participation
5	Senior National Championships	1986	Banglore	Participation
6	Senior National Championships	1987	Bhilai	Participation

TABLE 3
SHOWING THE ALL INDIA INTER_UNIVERSITY LEVEL ACHIEVEMENTS OF DEEPA VERMA IN VOLLEYBALL

S.No.	Competition	year	Venue	Medal
1	Inter University Championships	1984-85	Maysore	Participation
2	Inter University Championships	1985-86	Kurukshetra	Participation
3	Inter University Championships	1987-88	Dharvad	Participation
5	Inter University Championships	1988-89	Kolhapur	Participation

TABLE 4
SHOWING THE NATIONAL WOMEN FESTIVAL LEVEL ACHIEVEMENTS OF DEEPA VERMA IN VOLLEYBALL

S.No.	Competition	year	Venue	Achievement
1	National Women Festival	1979	Calcutta	Participation
2	National Sports Festival	1991	Gujrat	Participation

TABLE 5
SHOWING THE NATIONAL SCHOOL GAMES LEVEL ACHIEVEMENTS OF DEEPA VERMA IN VOLLEYBALL

S.No.	Competition	year	Venue	Achievement
1	National School Games	1980	Calcutta	Participation
2	National School Games	1981	Pume	Participation

TABLE 6
SHOWING THE INDIAN _UNIVERSITY COACHING CAMP ACHIEVEMENTS OF DEEPA VERMA IN VOLLEYBALL

S.No.	Competition	year	Venue	Achievement
1	Indian University Coaching Camp	1987-88	Selected	Participation
2	Indian University Coaching Camp	1988-89	Selected	Participation

TABLE 7
SHOWING OTHER NATIONAL LEVEL ACHIEVEMENTS OF DEEPA VERMA IN VOLLEYBALL

S.No.	Competition	year	Venue	Achievement
1	All India Four Square Volleyball Competition	1981	Gwalior	Gold
2	26th Senior National Athletic Championship	1988	Jabalpur	Participation

4. CONCLUSION

This study is regards to Deepa verma for a lot of achievements in volleyball in India. She has participated in various levels of volleyball tournaments from their childhood i.e. Junior and senior National levels, All India Interunibersity level, National Women festival and National Schools Games, Deepa Verma has conducted sports camps in various games and sports. After joining govt.woen college as a sports officer, She had produced more the one hundred women players in different games and sports, whose were taken part part from state to National level sports competitions.

Views of eminent personalities about Deepa verma has a great passion for Volleyball and very hard working, discipline, good learned women. Deepa verma used to give respect and honors to people who work hard with honesty and great respect and love for all people. Deepa verma always tried to better facilities and eminent volleyball coaches to upcoming volleyball. The sports personality level is above average according to standard level.

5. RECCOMENDATIONS

Deepa Verma recommended that the similar study may be conduct on other eminent sports personalities for their achievements at international sports.

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A STUDY OF SPORTS ACHIEVEMNT OF TRAINEES UNDER VIKRAM AWARDEE DEEPA VERMA AS A SPORTS ADMINISTRATOR

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ABSTRACT

The main purpose of study was to explored the sports achievement of trainees under Vikram Awardee Deepa vermaas a administrator. The present study was designed to investigate the achievements of M. P. State player in various games and sports. Data for this investigation was derived from the Primary sources and secondary sources. The present study was conducted on Deepa verma Vikram Awardee in Volleyball of M.P. State who represented M.P. volleyball team at National and International level. Based on the findings the analysis of data and interpretation of results are presented. This study is regards to trainees of Deepa verma for a lot of achievements in various games and sports. Researcher concluded that her trainees had participated in various games and sports included volleyball. After joining govt.woen college as a sports officer, She had produced 87 more women players in different games and sports, whose had taken part part from state to National level sports competitions.

Keywords: Award, Sports, Games, State level Player Achievement, championships

1. INTRODUCTION

Today all sports are played in almost all countries. Sports are an important tool for special empowerment through the skill and values learned, such as teamwork, negotiation, of participation in sport are thought to be especially important for girls, given that many girls, particularly in adolescence, have fewer opportunities than boys for special interaction outside the home and beyond family structures

India has produced some players with exceptional skill who have made their presence felt at the international events in individual sports such as Viswanathan Annand in chess, Geeth Seethe in Billiards, RamanthanKrishan, Vijay Amritraj, Leander paes, Mahesh Bhupathi and recently Sania Mirza who is making waves in tennis, Prakash Padukone and Pullela Gopichand in badminton; Rajyavardhan Rathore,Jaspal Rana Manshersingh (shooting),Anju George (long jump),

India is a developing nation and emerging as one of the super power in the world but if we compare the sports performance at international level there is not much to discuss and to tell abut, as we don't have big achievement other than the gold medal. Since there are lots of talent in the interior of India, so talent search and some motivation is must to find out the gem which definitely Lies among us At this point, it is out most important the story case study of good sports person should be highlighted and brought among the massage so that it can serve as the motivational factor for the off soaring's and budding sportsmen Indian athletics has seen a lot of changes and down during his journey, so far. The history of Indian athletics dates back to the Vedic era, when the Indian people used to take part in various track and field events.

Volleyball has captured the hearts and minds of millions of people worldwide with its exhilarating moments, lightning-fast action, and calculated plays. In the late 19th century, it was developed as a recreational activity by fusing elements of handball, baseball, basketball, and tennis. With time, it evolved into a highly competitive sport that participants of all ages and skill levels appreciated.

Volleyball's fundamental rules state that two teams, separated by a net, compete to score points by placing the ball on their opponent's court while preventing their own team from doing the same. Because of its unique blend of athleticism, skill, and teamwork, volleyball stands apart. Players must show agility, speed, and coordination when diving, spiking, blocking, and setting the ball in their constant pursuit of victory.

The Bikram Award of Madhya Pradesh stands as a prestigious recognition within the realm of cultural preservation and promotion in the heart of India. Established to honor and celebrate exceptional contributions to the fields of literature, art, music, and culture, this award embodies the spirit of excellence and dedication to the enrichment of Madhya Pradesh's cultural heritage.

Pradhan & Singh (2023) learn about the accomplishments, background, and contributions of Smt. Yumnam Sanathoi Devi in Wushu practice. To gather as much pertinent information about her career in Wushu, While Eysenck's Personality Questionnaire (R) was used to evaluate her personality, official sources and direct personal interviews provided the primary data for the study. Secondary data was gathered from a variety of websites, published materials, personal records, and pictorial records. The statistical tabulation method was used to examine the data that had been gathered. An investigation revealed that Smt.Y. S. Devi had been excellent athlete and extrovert, but rose to extraordinary success through hard effort and persistence.The skills of Shakti Singh as an administrator and sports promoter were assessed by Kumar & Nara (2023) of Mr. Shakti Singh, who was an Arjun award winner and head coach of the national centre of excellence in Patiala at the moment. 11 15 A self-structured, open-ended questionnaire created

by the researcher was used to evaluate a sample of 25 male and female participants, respectively, as well as various demographic factors like gender and degree of participation. The applied tool consists of eighteen questions, each of which must have a Likert scale response within a predetermined window of time. The correlation was evaluated using IBM SPSS 20.0's chi-square test. The gender and success level chi-square findings yielded sig for degrees of freedom 3 and 1, respectively. Because they were more than 0.05, values of 0.157 and 0.707, respectively, were not statistically significant. It was clear from the comments that were received and from the researcher's conversations with different athletes and administrators that Mr. Shakti's goals for track and field in particular were well-known. Singh and Kumar (2023) assert that boxing is an extremely ancient sport. It all started with the game in Europe. The game was first played in India in the British era. 5. In boxing matches, competitors bravely and deftly display their offensive and defensive prowess. India has produced some excellent boxers on occasion; one such athlete is Shri Jaipal Singh. Thirteen Jaipal Singh, the fourth Arjuna Awardee, was born in on January 15, 1958 in district Sangrur (Punjab).. He had 03 gold medals in a row in PU, Chandigarh during inter-collegiate competition. Three gold medals in a row have been won by Shri Jaipal Singh in the intervarsity competition. He had attended the national camp boxing team due to nation's champion in 1984. He had won gold in the King Cup boxing competition (1985), Silver medal in Seoul (1986) during 10th Asian Games,. He trained Punjabi police fighters for contests both domestically and abroad during his tenure. From 2004 to 2018, Shri Jaipal Singh held the positions of general secretary of the Punjab Boxing Association and vice president of the Indian Boxing Federation. He has served on the Indian boxing selection committee since 1997.

2.METHODOLOGY

2.1 Selection of the subject

In this case study the researcher was not select the subject from large population. The subject of this study was only Deepa Verma.

2.2. Research Design

The integrated approach was used to collect valid and reliable information related to investigation, several efforts have also been made to study his philosophy with regard to sports and physical education as a profession in India.

2.3 Data collection

2.3.1 Primary Sources

To maintain the reliability and truthfulness, the investigator asked the similar questions by different sentence after a gap of time to the respondent. Hence, it could be assumed that the information sought and collected through the interview is reliable.

2.3.2 Secondary Sources

Investigator personally goes through the student's record which carries information about state level competitions from Deepa Verma. Study of related literature is available in different Universities, Libraries, physical education college libraries, internet and other sources.

2.3.3 Official records:

To get the first hand information investigator was visited to his house in M.P. and to know his job carrier as a administrator. .

2.4 Statistical Analysis

Data was collected through various sources. Quantitative analysis was also employed on the collected data. Accordingly, the factors representing the responses of the subjects were presented in numerical form.

3. RESULTS

TABLE 1
SHOWING THE M.P. STATE LEVEL ACHIEVEMENTS OF FEMALE PLAYERS IN VARIOUS SPORTS AND GAMES UNDER DEEPA VERMA

Session	Name of Sports	Number of Players	Total
1995-96	Kho-Kho Badminton	01 01	02
1996-97	Basketball Kho-Kho Table Tennis	01 02 02	05
1997-98	Badminton Kho-Kho	01 01	02
1998-99	Basketball	01	01
1998-99	Basketball	01	01
1999-2000	\Kho-Kho Basketball	01 01	02
2000-2001	Kho-Kho Handball	01 02	03
2001-2002	Hockey Basketball Handball Volleyball Athletics	02 02 01 01 01	07
2002-2003	Chess Basketball Kabaddi Hockey Badminton	01 04 03 06 01	15
2003-2004	Kho-Kho Chess Handball Kabaddi Basketball Athletics	02 01 03 05 03 01	15
2004-2005	Chess Kho-Kho Basketnall Athletics Handball Hockey	01 02 01 03 01 01	09
2005-2006	Kho-Kho Athletics	03 01	04
2006-2007	Table Tennis Kho-Kho Basketball Athletics	02 02 01 01	06
2007-2008	Table Tennis Basketnall Kho-Kho Athletics	01 01 01 01	04
2008-2009	Table Tennis Basketnall Athletics	01 01 01	03
2009-2010	Handball Hockey Cricket Kabaddi	02 01 03 02	08
			87

The above table 1 indicates that the Deepa verma as a Sports Administrator, had prepared eighty seven players in various sports and games, and taken part in M. P. State level Tournaments under her guidance and Coaching of Deepa verma during theperiod from 1995-96 to 2009-2010. Since from 1994,

4. DISCUSSION

Deepa verma also developed sports infrastruture in college sport campus for playerrs which are are the key responsibilities and functions of sports administrators in college.She keeps on updating his records on his daily basis. She has also ability to overcome obstacles easily. She possesses good conversational skills. The fact that he performs his assignments with honesty and sincerity She acts as source of inspiration for all who so ever contacted him. She is providing strength and support to every-one by him. she follows principle of punctuality and discipline in his life. The games are played both individually and in teams. In individual sports, one player competes with another player and in team sports one team competes with the other team. A team is made up of two or more players. Individual sports include athletics, cycling, boxing, judo, wrestling, wushu etc. and team sports include football, hockey, cricket, basketball, volleyball, kabaddi etc.

5. CONCLUSION

Deepa Verma is a great sports personality. She made history when she was awarded the vikram award by the Govt. of M,P. in the game of Volleyball. She has participated International Pre-asiad volleyball competition for the selection of Indian women team. His father is a Professor in Unversity and his mother is a sports officer is Govt. women college and International Volleyball player. Investigator feels that this study will motivate all sports person and physical education students to participate in volleyball and other sports with full dedication and determination to develop sports of India. This study is regards to Deepa verma for a lot of contribution in development of volleyball in India. She had produced eighty seven state level players in various games and sports.

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AN EXPERIMENTAL STUDY ON IMPROVING EYE-HAND CO-ORDINATION BY PATENTED DRILL EXERCISES IN ORDER TO ENHANCEFOREARM PASSING SKILLS IN INDIAN MALE PROFESSIONAL VOLLEYBALL PLAYERS

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ABSTRACT

Background : Eye-hand coordination is the synchronization between vision and hand movements for precise task execution, essential in activities like sports, crafts, and everyday tasks. Eye-hand coordination is crucial for volleyball players, especially in forearm passing. It allows them to accurately judge the trajectory of the ball and position their arms for precise passes. This skill enhances reaction time, agility, and overall performance on the court, making it essential for effective game play.So the Study is done on YMCA Club professional Male Volleyball Players, the population size was 30,2 groups were made Experimental and Conventional Group the Groups were made by Simple Random Sampling (Lottery Method).The Players were given Exercises (Experimental Group) and the other Players were following the Club Routine Exercises only. there was a Eye-hand Coordination Test done thrice in protocol of 6 week Research period as a Screening Tool to find out the Significance with the help of Statistics (Graphpad InStat Version 3.10),The Study Concluded that the patented drill exercise has a significant effect on improving Eye Hand Coordination on Forearm Passing Ability in Indian Male Professional Volleyball Players

Keywords: Volleyball Players, Eye-hand Coordination, Forearm passing, Drill Exercies, Indian

1.INTRODUCTION

Forearm passing is a pivotal technique in volleyball, reflecting broader principles of hand-eye coordination essential not just for sports but also daily activities. Volleyball's strategic elements like passing, serving, smashing, and blocking underscore the sport's complexity and the importance of mastering fundamental skills. Eye-hand coordination is a critical factor in a player's success, impacting their ability to execute precise movements such as forearm passing accurately.

The intricate cognitive skill of hand-eye coordination governs how our hands respond to visual stimuli, affecting motor gestures in sports and everyday tasks. In volleyball, where anticipation and precision are crucial, synchronization between eye and hand movements is paramount. External factors such as training methods also influence coordination, highlighting the holistic approach needed for skill development.

The integration of foot, hand, and eye synchronization is vital for executing techniques like forearm passing effectively. Coordinating body movements reflects high skill levels, crucial for optimal performance in volleyball. Training protocols often focus on improving hand-eye coordination through tailored exercises and assessments, addressing players' proficiency in fundamental skills like passing.

Observations in the field reveal the impact of hand-eye coordination on passing accuracy, with uncoordinated movements leading to errors. This underscores the ongoing need for targeted training to enhance players' coordination and overall performance. The neurological basis of eye-hand synchronization involves intricate activation of sub-cortical structures, highlighting the complexity of motor control in sports like volleyball.

Overall, mastering hand-eye coordination is a continuous process, influencing players' abilities to anticipate, react, and execute movements accurately. It's an essential component of volleyball's technical proficiency and contributes significantly to a team's success on the court.

Two separate training techniques are used three times a week for 90 minutes each.Trainings were created with equal size, repetition, and intensity for all groups (ball contact). The whole part training method is put to practise by the two groups. Additionally, another group practises utilising the mini-game training technique..Conclusion:This study demonstrates that using whole-body and small-group training techniques significantly affects a volleyball player's forearm passing ability (Pratama and Irianto, 2019),

Hand-eye Coordination Drill Exercise 1: Cascade BallJuggling-Each juggling lesson lasted between 10-12 minutes and the instruction given was identical regardless of object color. The final assessment of juggling was done by summing the total number of consecutive catches achieved over three trials the results were not completely expected. Conclusion:Having a brightly lit room would be more effective in enhancing tracking of moving objects, mixed objects are easier to catch (McCoy, 2007).

Hand-eye Coordination Drill Exercise 2:Cascade ScarfJuggling-Each juggling lesson lasted between 10-12 minutes and the instruction given was identical regardless of object color. The final assessment of juggling was done by summing the total number of consecutive catches achieved over three trials the results were not completely expected. Conclusion: Having a brightly lit room would be more effective in enhancing tracking of moving objects, mixed objects are easier to catch (McCoy, 2007).

Equipment for the test was tennis ball and stop watch. Initial position: torso bent forward, ball in one hand. By command “Go” athlete moves the ball between legs maximally quickly at knees’ level (imaginable “eight” was the trajectory of ball’s movement). With it the ball is

passed from hand to hand Conclusion :Ability to reconstruct and adapt motor actions was assessed with tests 4-5 If only female students are to be included in the sample, for example, the situation can be different (Boichuk, et.al., 2017)

1.2 Limitations

The study was done on professional players of volleyball, playing at different level. The study is also done for forearm-passing ability skill only. The Population Size is Small. To Study the Effect of Eye And Hand Coordination by using patented drill Exercises in Male Professional Volleyball Players

1.3 Justification of Study

Exploring the intricate realm of hand-eye coordination within the context of volleyball demands precise activation of sub-cortical structures governing motor skills, making it a challenging yet crucial area of study. While research on eye-hand coordination exercises in volleyball players is extensive, limited focus has been placed on enhancing forearm passing ability, particularly among professional male volleyball athletes in India, which motivates the focus of my study.

1.4 Objectives

1. To Find out the Effect of Eye And Hand Coordination to Increase Forearm Passing Ability by Using Patented Drill Exercises (Interventional group)
2. To Find out the Effect of Eye And Hand Coordination toIncrease Forearm Passing Ability by Using Routine Exercises (Controlled Group)
3. To Compare the Effect of Eye And Hand Coordination to Increase Forearm Passing Ability in both the groups.

1.5 Hypotheses

H-1: There is no statistically significant effect of patented drill exercises in eye hand coordination on increasing the forearm passing ability on indian male professional volleyball players.

H-2: There is statistically significant effect of patented drill exercises in eye hand coordination on increasing the forearm passing ability on indian male professional volleyball players.

2. METHODOLOGY

2.1 Sample size

30 (95% confidence level) – openepi, Formula [(d2/Z21alpha/2*(N-1)+p*(1-p)]. Simple Random Sampling was choosen by Lottery Method. Volleyball players were selected according to the inclusion criteria.. Inform consent form.was given to participants. Participants were selected randomly by lottery method. Total participants were 30, The Controlled group and Interventional Group consisted of 15- 15 participants respectively

Hand Eye Coordination Test is performed prior to starting of Drill Exercises i.e in start of 1st and after the end of 3rd and 6thWeek.The Interventional drill exercises and Routine exercises in club were given to Group- A and Group B respectively.

2.2 Administration of Exercises

S.No.	Exercise	Frequency	Duration in Minutes
1	Passing Ladder Drill	1 time/day for 6 weeks	10-15
2	Passing Against the Wall:	1 time/day for 6 weeks	10-15
1	Cascade ball Juggling	1 time/day for 6 weeks	10-12
2	Cascade scarf Juggling:	1 time/day for 6 weeks	10-12
3.	Ten-Eight Exercise	5 times/Day for 6weeks	10

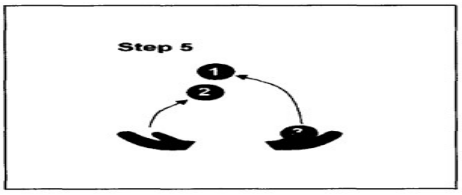


Figure:1- Cascade Ball Jggling Exercise

Figure: 2 - Cascade Scarf Juggling Exercise

Figure: 3- Ten-Eight Exercise

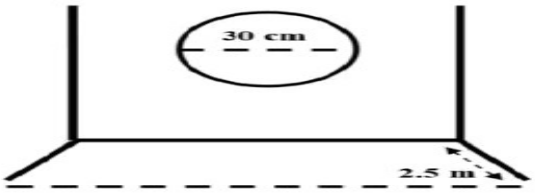


Figure: 4- Hand-Eye coordination test Instrument

2.4 Researcg Design

(i). Experimental Study
(ii) Volleyball Sports Club (YMCA)
(iii). Professional volleyball players
iv) 18 months Duratiom

2.5 Inclusion and Exclusion criteria

Professional Male Volleyball Players were in18-28 age group, mainly Concentrating on Forearm Passing Ability Technique. The female volleyball players, were exckuded from this study. The injured and retired players, and recreational volleyball players were also not included in this research.

3. RESULT

Statistical Analysis was done on Software Graphpad InStat Version 3.10 on Pre-Test and Post-Test Analysis was been done. Test of Normality was been done by Shapiro-wilk Test

The statistical analysis was done by Graphpad In Stat Version 3.10 • The Intragroup analysis of both the conventional and experimental group was done by using one way analysis of variance (ANOVA), The P -value of Conventional group was found to be 0.3728 and considered not significant, and Experiment group P -Value was 0.0005 and considered extremely significant. The Post Test Analysis of each week between both the group was done by unpaired t-test Where 1st and 3rd week P -value was found to be s >0.9999, considered not significant and 0.2252, considered not significant Respectively, Where as the P value of 6th week was 0.0012 and considered very significant. The Results Shows that there is statistically significant effect in Interventional group then the Conventional group. The data analysis has been presented from Table 1 to 5 and depicted in graphs from 1 to 5.

TABLE 1

M	SD	N	P -Value	Passed Normality Test ?
23.87	2.356	15	> 0.10	Yes
24.4	2.354	15	> 0.10	Yes
24.2	2.274	15	> 0.10	Yes

As the Mean and Standard deviation for all the three weeks passed the normality Test The P Value was found out by using one way analysis of variance ANOVA, After doing Repeated measures The P value was found to be 0.3728, not considered significant.

Graph No:1

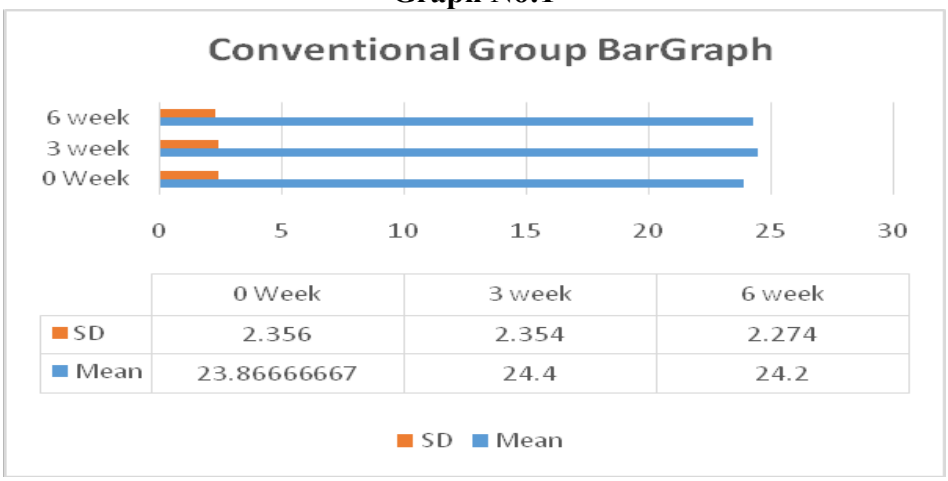


TABLE 2

M	S D	N	P-Value	Passed Normality Test ?
23.87	2.295	15	0.0439	No
25.33	1.718	15	> 0.10	Yes
27	1.964	15	> 0.10	Yes

After using shapiro Wilk test for normality the Mean and Standard deviation for First week didn't passed the Normality test but the third and sixth week passed the normality test the P Value was found out by using one way analysis of variance ANOVA, The P value was found to be 0.0005 considered extremely significant.

Graph No:2

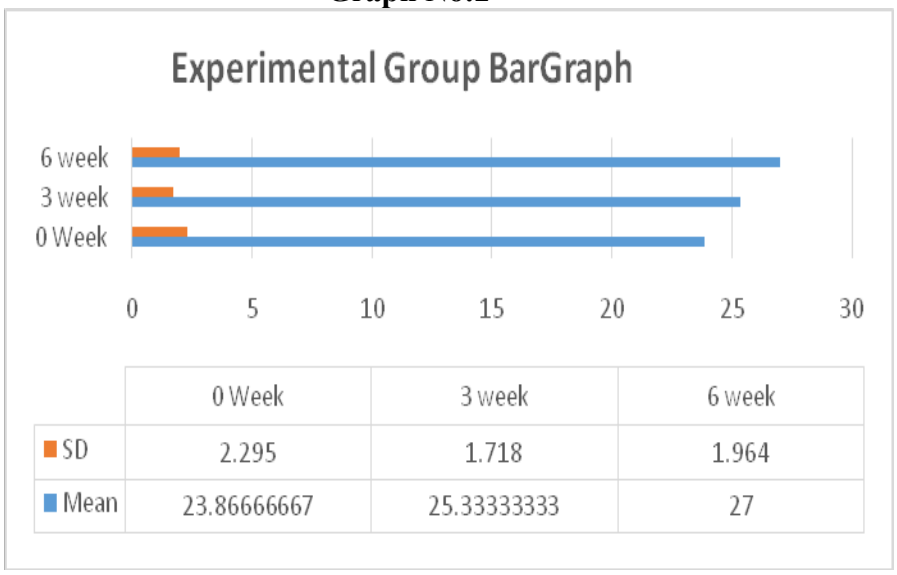


TABLE 3

M	S.D	N	P - Value	Significance
23.87	2.295	15	> 0.9999	Not significant
23.87	2.356	15		

Unpaired T-Test was performed. Each value was paired with the value next to it, The Values are sampled from Gaussian Distribution and the value followed by Two Tail P value. The two-tailed P value is >0.9999, not considered significant. t = 0.000 with 28 degrees of freedom.

Graph No:3

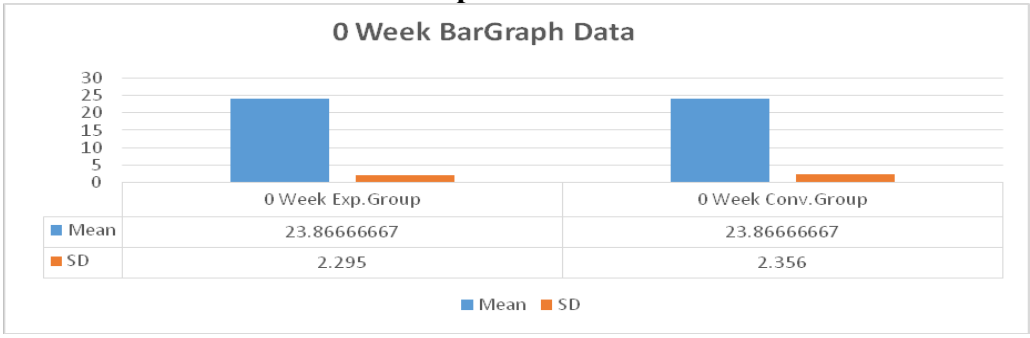


TABLE 4

M	SD	N	P- Value	Significance
25.33	1.718	15	0.2252	Not Significant
24.4	2.354	15		

We performed unpaired T-Test as each value was paired with the value next to it, The Values are sampled from Gaussian Distribution and the value followed by Two Tail P value.The two-tailed P value is 0.2252, not considered significant. t = 1.240 with 28 degrees of freedom.

Graph No:4

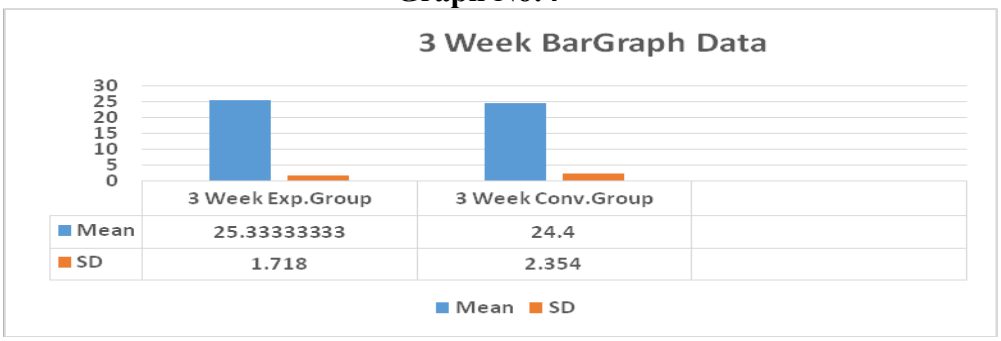
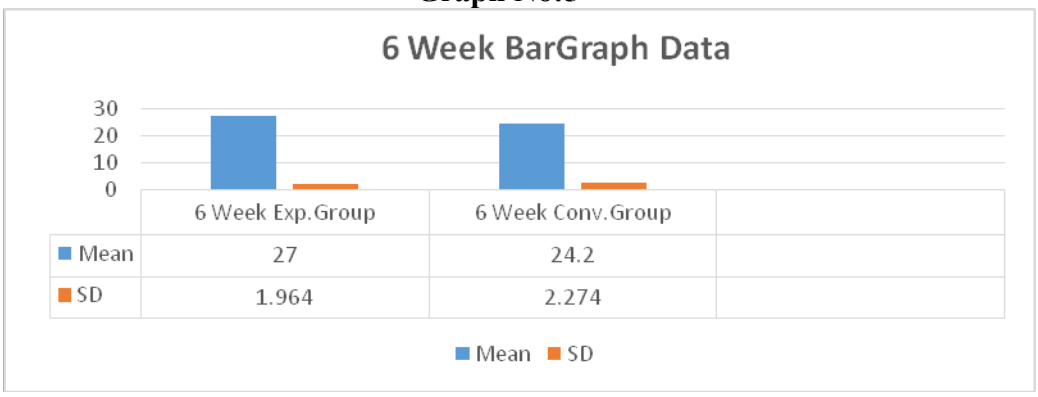


TABLE 5

Mean	Std. Deviation	Sample Size (N)	P Value	Significance
27	1.964	15	0.0012	Very Significant
24.2	2.274	15		

We performed unpaired T-Test as each value was paired with the value next to it, The values are sampled from Gaussian Distribution and the value followed by Two Tail P value. The two-tailed P value is 0.0012,considered very significant = 3.609 with 28 degrees of freedom.

Graph No:5



4. DISCUSSION

To study the effect of eye and hand coordination exercises in male professional volleyball players by using eye hand coordination test In my Parent Article i.e Pratama Y, Irianto D. Whole Part or Mini Games, which one is the most effective training method to improve forearm passing ability in volleyball?. In 6th International Conference on Educational Research and Innovation (ICERI 2018) 2019 Jul (pp. 81-84). Atlantis Press. There are various studies being done on Eye Hand Coordination Exercises On Volleyball Players on various domains but a very few studies have been done for the increase of forearm passing ability and that too on professional male volleyball in India,which motivated me and So the purpose of study.participant selected randomly by lottery method. total participants-30, control group-15 and 15-Interventional group, hand eye coordination. Test is performed prior to starting of drill exercises i.e in 1st,3rd and after the end of 6th Week. The Inclusion Criteria were population 18-28 Age group, professional male volleyball players and mainly concentrating on forearm passing ability technique,did statistical The statistical analysis by Graphpad In Stat Version 3.10, For the Conventional Group the P value is 0.3728, considered not significant. By using one Way analysis of variance ANOVA and for Experimental Group The P value is 0.0005, considered extremely significant. By using one way analysis of variance anova. For 0 week we performed unpaired T-Test as each value was paired with the value next to it,The Values are sampled from Gaussian Distribution and the value followed by Two Tail P value. After doing Repeated measures The two-tailed P value is >0.9999, considered not significant, By using one way analysis of variance anova. For 3 week we performed unpaired T-Test as each value was paired with the value next to it, The Values are sampled from Gaussian distribution and the value followed by Two Tail P value. After doing Repeated measures The two-tailed P value is 0.2252, considered not significant, By using one way analysis of variance anova For 6 week we performed unpaired T-Test as each value was paired with the value next to it, The Values are sampled from Gaussian Distribution and the value followed by Two Tail P value. After doing Repeated measures The P value is 0.0012,considered very significant. T 3.609, By using one way analysis of variance anova.There was a statistically significant difference seen between Group 1 which was given exercises and Group 2 which were following their club routine for all domains at all time intervals.

As Experimental group is more significant than Conventional Group ,Thus Null hypothesis is rejected and Alternative hypothesis is Accepted. Given that the proper spatiotemporal activation of the sub-cortical regions that also control hand and eye movements is necessary for coordination, Eye-hand coordination involves complex physiological processes that integrate visual information with motor responses.The players' eye-hand coordination improved by the help of these exercises by use of Neural Pathways, Visual Perception, Motor Control, Proprioception, Neuroplasticity, Recation Time, Muscle Memory and Feedback Mechanism. Overall, integrating targeted eye-hand coordination exercises into training regimes can be a valuable strategy for optimizing athletes' skills, reaction times, and performance in sports requiring precise visual-motor coordination, such as volleyball

5. CONCLUSION

According to the statistical analysis the results concluded was that the patented drill exercise has a significant effect on improving Eye Hand Coordination on Forearm Passing Ability in Indian Male Professional Volleyball Players.

6. RECOMMENDATION

The study can be doneon Female Volleyball Players. The study can be doneon a large population. The study can be done Restricting to any one Professional level The study can be done for Other skills in Volleyball playing

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EFFICACY OF PHYSIOTHERAPY INTERVENTIONS FOR MANAGEMENT OF PRIMARY HEADACHES

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ABSTRACT

Primary headache disorders encompass a heterogeneous group of neurologic disorders that cause recurrent or persistent head pain without any clear underlying cause Headache is one of the most common reasons for neurologic consultation.The epidemiology of the maximumpublic primary headache disorders, tension-type headache and migraine, the maximumpublic trigeminal autonomic cephalalgia, cluster headache, as fine as chronic regular headache are lectured in this assessment.The pathophysiological mechanisms that underlie post-traumatic headache remain largely unknown, but several possible disease mechanisms have been proposed, for which we present the supporting data below. These mechanisms contain impaired down modulation, neurometabolic variations and instigation of the trigeminal sensory system.

Keywords: Efficacy, Management, Search strategy, Physiotherapy, Headache

1. INTRODUCTION

Primary headache disorders include a heterogeneous collection of neurologic disorders that rootregular or determined head pain without any purebasicroot (Robins and Lipton et al., 2010). Headache is one of the most common reasons for neurologic consultation. For the last 15 years, the diagnostic criteria of the International Headache Society (IHS) have been the accepted standard. Another edition of The International Classification of Headache Disorders replicates our better-quality understanding of aboutconditionsto the documentation of original disorders. Another edition of the ISH classification separates headaches obsessed bymain and minor disorder. "Primary headaches" are a type of headache that is not a symptom of an underlying medical condition. The four organization of primary headaches includes migraine, tension-type headache, cluster headache and trigeminal autonomic cephalalgias (RB Lipton et al., 2004).

Primary stabbing headache (PSH) is commonlybelieved to be a primary headache disorder, start at early age, predominantly in females, regularlyrelated with migraine or cluster headache and alert to indomethacin. A recent population-based study has shown that PSH is common in the general population (J-L Fuh, K-H Kuo & S-J Wang., 2007).

The education of headache triggers is troubled with problems, foremost of which is the largeinconsistency of specific trigger effects that regularlypreventsformation of purecause-effect relations. No one stimulus attends as a trigger for all patients, also within anonlyspecificinfrequently does contact to aknownprecipitate always indicator headache (Rothrock JF.,2008).

According to the Diagnostic and Therapeutic Rules of the Italian Culture for the Education of Headaches, the incidence of Osmophobia is stated in the extrascientificdata in favour of the diagnosis of headache; additionally, the Rules of the Canadian Headache Society-recommend in their criteria for the diagnosis of migraine the presence of osmophobia, which is judged to be highly sensitive and specific for migraine (Giorgio Zanchin, et al., 2005).

2. ETIOPATHOGENESIS

The patho-physiological strategies that cause post-traumatic headache continuemostly unidentified, but somelikely seasestrategies have been projected, for which we present-day the supporting data below. These strategies include reduced descending variety, neurometabolic vagaries and initiation of the trigeminal sensory structure.

In this Review, we present-day the existing information nearby the epidemiology of PTH and the original pathophysiological strategies. We plancomingstudy opportunities to advance our understanding of the disease mechanisms, and treatment options for PTH (Nampiaparampil, D. E.,2008).

The pathophysiology of migraine is controversial, but the prevailing theory describes a persistent neurogenic dural inflammation with plasma extravasation (swelling). Our research suggests that this neurogenic inflammation may also occur locally, closely adjacent to a relatively accessible maxillary nerve segment (Friedman MH,2004).

Hypnic headache (HH) is main headache conditionconsidered by repetitive strictly sleep associated headache attacks causing wakeful of patients. The headache typicallyarises at the similarperiod at nightly. The original pathophysiology of HH is still rather enigmatic. This review summarizes the current knowledge regarding pathophysiologic mechanism in this headache disorder (Dagny Holle and Mark Obermann.,2014).

3. CLINICAL PRESENTATION

3.1 Migraine

- **Examination:**Topicsfresher than 12 years were exceptedbecause of anxietiesabout their skill to understand and constantlyanswer to question. symptomrecords were used to classify migraineurs with the International Headache Society (IHS) based definition described above.
- **Diagnosis of Migraine:** Approximately half (48%) of IHS-defined migraineurs (41% of males and 51% of females) informed a doctoranalysis of migraine. These proportions are higher than those estimated in the 1989 survey in which 38% of IHS-defined migraineurs (29% of males and 41% of females) informed a doctoranalysis.
- **Medication Use:** A total of 41% of IHS-defined migraineurs used prescription drugs for headaches, a finding similar to that observed in the American Migraine Study in which 37% reported use of prescription drugs for headaches. The quantity of IHS-defined migraineurs byindividual over-the-counter medicines to treat their headaches remained 57% in 1999, associated with 59% in 1989. A very small subgroup used no medication at all(Richard B. Lipton, et al., 2001).

3. 2. Tension-type headache

- **Biographic data:** The patients' age ranged between 36.8±11.4 and 39.5±12.7 years and was comparable in the three study groups. The common of affected role were female.
- **Lifestyle:** Physical activity, quality of sleep, consumption of alcohol, caffeine and chocolate and smoking habits were similar in the two groups of clinic patients and in the subjects from the population. Some of the parameters showed numerical differences, but none of these differences reached the level of statistical significance.
- **Medical history:** One quarter of the affected roleinformed current diseases beside headache. The most frequent diagnoses were arterial hypertension (n=13), followed by elevated serum cholesterol, allergies, hypothyreosis and glaucoma. In none of the hypertensive patients was their evidence of headache attributed to arterial hypertension(Christian Wöber, et al., 2006).

3. 3. Cluster headache

- **General features:** The lifetime prevalence of cluster headache is 0.12% (95% confidence interval 0.10% to 0.15%) in 16 articles across four continents, although data on one year incidence are limited. Onset can occur at any age but is typically between 20 and 40 years of age on the origin of large case series and questionnaires.
- **Comorbidities:** Cluster headache is connected with an improveddanger of sleep apnea andstimulatingly, a possiblyreduced risk of diabetes. Psychological comorbidities are mutual in cluster headache, specially mood syndromes as patients are at an improved risk of equally anxiety and depression.
- **Differential diagnosis:**Dualthoughts are significant in the differential diagnosis of cluster headache: primary headache conditions with parallel features and secondary headaches that present-day with cluster-like headaches. For primary headaches, cluster headache is part of a usual of five disorders called trigeminal autonomic cephalalgias; these all present-daymoderatelyalso but change in time, frequency, and treatment(Emmanuelle A D Schindler and Mark J Burish., 2022).

3. 4. Other primary headaches- Primary stabbing Headache

- **Patient characteristics:** The demographics and headache appearances of the educationfocuses are recorded. Our educationtopicsexposed a woman likemajority (69.2%) and inclusivevariety of age (median, 54 years; range, 25–83). The indicationshappened as a design of sole (15.4%) or succession (84.6%) of attempts.
- **Disease courses:** Demographics and headache appearances of educationfocuses were associatedgiving to the chronicity of the PSH at the period of performance.
- **Clinical patterns of PSH:** The process of designdocumentation. The characteristicdesigns are demonstrated. Twenty-eight patients showed the monophasic design(Dong Yeop Kim, et al., 2017).

4. INVESTIGATION

4.1 Computed Tomography Versus MRI

Computed tomography (CT) detects most abnormalities that may cause headaches. CT generally is preferred to MRI for evaluation of acute subarachnoid hemorrhage, acute head trauma, and bony abnormalities.

4.2 Electroencephalography

The electroencephalogram (EEG) was a standard test for evaluation of headaches in the pre-CT scan era. Gronseth and Greenberg reviewed the nonfiction from 1941 to 1994 on the helpfulness of EEG in the assessment of patients who must headache.

4.3 Neuroimaging During Pregnancy and Lactation

When there are appropriate indications, neuroimaging should be performed during pregnancy. Through the practice of lead shielding, a standard CT scan of the head exposes the uterus to less than 1 mrad. The radiation dose for a typical cervical or intracranial arteriogram is less than 1 mrad.

4.4 Lumbar Puncture

MRI or CT scan always is performed before a lumbar puncture for evaluation of headaches except in some cases where acute meningitis is suspected. Lumbar puncture can be diagnostic for meningitis or encephalitis, meningeal carcinomatosis or lymphomatosis, subarachnoid hemorrhage, and high (e.g., pseudotumor cerebri) or low CSF pressure (Randolph W. Evans and MD., 2019).

5. REHABILITATION

- **Spinal Manipulation**Spinal manipulation, is found superior to the drug therapy at follow up and when compared to mobilization placebo, the manipulation group experienced significant improvements in pain intensity (Debashish., 2012).
- **Acupuncture** acupuncture has anextendedinstitution of practice for the treatment of various pain situations, as well as headache. Its success has remainedconsideredmostly for primary headaches, mainly for migraine and tension-type headache (TTH), whereas no controlled studies are present in the literature about cluster headache and other primary headaches Eismann, et al., 2009).
- **Trigger point manual treatment** myofascial Trigger point treatment is usually pursued with invasive (dry or wet needling) or non-invasive techniques (manual treatment or low-level laser therapy) that, according to the most accepted hypothesis, are believed to decrease the ischemia associated nociception started by the contracture of a minorpercentage of muscle and therefore, the grade of sensitization of TNC (Yeganeh Lari, et al., 2015).

- **Cupping therapy** Cupping is an East Asian medicationrehabilitation that has remained used for thousands of centuries. The physician positionsdifferent cups on the patient's covering for cupping therapy and produceslimitedpressure. Severalcategories of cupping takeremainedexperienced in clinical fields as well astaken cupping, wet cupping, moving cupping (A. Kaki, et al., 2019).
- **Dry Needling Technique** Dry needling is attractivemore and morecommonamongst physiotherapists for the organization of myofascial pain. Dry needling includes the addition of a minorinstrument needle into known trigger points (definite as 'hyperirritable spots inside a skeletal muscle or in the muscle fascia that are relatedby a hypersensitive palpable nodule') (Linde K, et al., 2009).
- **Kinesio taping for Muscle-Contraction Headache**A muscle-contraction headache develops from forward flexion of the head during work, or from excess stress during activities of daily life. The Kinesio Taping® Method will assist with reduction in muscle 'tension. Clean the forehead to remove oils prior to application (Kenzo kase & Jim Wallis., 1998).
- **Yoga for headaches** Yoga, coupling physical workoutby breathing and relaxation, is a commonalternatemethod of mind– body therapy. Yoga long has remained used to decrease the physical signs of long-lasting pain; meditation and yoga also may help individuals deal with the emotional aspects of chronic pain, dropping anxiety and depression (Kim DH, et al., 2005).
- **Hydrotherapy for headaches** Hydrotherapy otherwise water rehabilitation is the application of water which initiates healing. Three states of water (liquid, steam, ice) can be used therapeutically. The goals of hydrotherapy are to increase the circulation and quality of blood (Chowdhury RS, et al., 2011).
- **Myofasial release for headaches** Myofascial release (MFR) is a therapeutic technique facilitating the release of fascial restrictions by using gentle pressure and stretching with the intention of restoring range, decreasing pain, and optimizing length(Kharwandikar P, et al., 2019).
- **Neuromuscular Technique for headache** Physiotherapy is a form of non-pharmacological health service that can help patients suffering from Tension Type Headaches to reduce pain and discomfort in the skull due to tension of the neck muscles improve body movement and function and improve the musculoskeletal system and improve the life of Tension Type Headache patients (Nagrale et al., 2010).

6. LITERATURE REVIEW SEARCH STRATEGY

Search was performed at the beginning of feb,2024 on PubMed and Google Scholar databases. A combination of Keywords and Medical Subject Headings including "Primary Headaches", "Rehabilitation in Primary headaches", "Migraine, Tension Type Headaches". The affiliated information in this research project was attained from both review articles and clinical trials published from the year 2005-2024.

As Selection criterion, it was decided that articles included in the study needed to describe at least 1 possible risk factor associated with Primary Headache or a rehabilitation protocol for the same. The articles which were not written in English, not available in full text, assessing a region other than shoulder complex were excluded.

The search strategy identified 54 potentially relevant articles on PubMed and 43 on Google Scholar amounting to a total of 61 articles. Next title and abstract review, only 61 articles were considered relevant and retained for analysis.

CONCLUSION

Primary headache conditionsinclude a heterogeneous group of neurologic syndromes that originrepeated or determined head pain without any purebasicorigin Headache is one of the greatestmutual reasons for neurologic consultation. For the past 15 years, the investigativemeasures of the International Headache Society (IHS) takebe situated the believed standard.Primary headache syndromesinclude a heterogeneous group of neurologic conditions that reason repeated or determined head pain without at allstrongoriginalroot.

The epidemiology of the maximummutual primary headache syndromes, tension-type headache and migraine, the recordcommunal trigeminal autonomic cephalalgia, cluster headache, as well as long-lasting regular headache are give a lecture in this analysis. A primary Headaches is not anindication of an originalillness. Chemical action in your brain, the nerves or blood vessels nearby your head containershow a part in primary headaches.

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THEORITICAL CONCEPT OF VARIOUS PSYCHOLOGICAL ATTRIBUTES OF MALE AND FEMALE ATHLETES

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ABSTRACT

This research paper aims to provide a comprehensive theoritical concept of comparative analysis of the psychological attributes exhibited by male and female players in team sports. The study explores the potential differences and similarities in these aspects based on gender and their implications for team dynamics and performance. The research involved a mixed-methods approach, combining quantitative surveys and qualitative interviews to gather data from diverse sports teams. The findings suggest that while there are some gender-related patterns, individual variations are substantial. Understanding these nuances can contribute to better team management and performance enhancement strategies.

Keynotes: Leader, behaviour, psychological Skills, cohesiveness, gender

1. INTRODUCTION

Team sports require effective cooperation, communication, and leadership among players to achieve optimal performance. The role of gender in influencing psychological characteristics, leadership preferences, and team cohesion within sports teams remains a topic of interest. This paper aims to examine how male and female players differ or align in terms of these factors and their potential implications for team dynamics.

1.1 Psychological characteristics

Psychological characteristics are the intricate and multifaceted aspects of an individual's mental and emotional makeup that shape their thoughts, feelings, and behaviors. These characteristics encompass a wide range of traits, tendencies, and attributes that collectively define a person's unique personality and contribute to their interactions with the world around them. Rooted in the complex interplay of genetics, upbringing, environment, and personal experiences, psychological characteristics provide insights into how individuals perceive, process, and navigate the challenges and joys of life.

Understanding psychological characteristics is crucial not only for individual self-awareness and personal growth but also for fields such as psychology, education, business, and healthcare. Researchers, clinicians, educators, and employers alike seek to unravel the intricacies of these characteristics to enhance mental well-being, foster positive relationships, and optimize human potential.

Throughout history, various psychological theories and frameworks have emerged to categorize and analyze these characteristics. From Sigmund Freud's psychoanalytic theory to contemporary approaches like the Big Five personality traits, these theories offer lenses through which we can explore the dimensions of human behavior and emotion. Whether investigating introversion-extroversion tendencies, emotional intelligence, cognitive styles, or resilience, the study of psychological characteristics provides a deeper understanding of what makes us uniquely human.

In this exploration, we delve into some of the most fundamental psychological characteristics that shape who we are. We will examine how these traits are assessed, how they influence our daily lives, and how they contribute to our interactions with others. By uncovering the intricacies of these characteristics, we can gain valuable insights into the rich tapestry of human nature and pave the way for personal and collective growth

1.2 Leadership Preferences

Leadership Preferences: The survey responses indicated that male and female players showed a preference for transformational leadership styles, emphasizing inspiration and teamwork **(**Loughead, & Hardy, 2005). However, male players exhibited a slightly higher inclination toward transactional leadership, which focuses on rewards and punishments. Qualitative interviews shed light on the underlying reasons, suggesting that gender socialization and role expectations may contribute to these preferences (Bass, & Riggio,2006)..

Effective leadership within sports teams plays a pivotal role in shaping team dynamics, performance outcomes, and overall cohesion. The choice of leadership styles and the way leaders interact with team members can significantly influence athletes' motivation, commitment, and overall satisfaction. Leadership preferences, the manner in which individuals perceive and respond to different leadership approaches, are of particular importance in understanding how male and female players perceive and engage with their team leaders.

Leadership within sports settings involves a complex interplay of psychological, social, and situational factors (Chelladurai, 2007).. While leadership styles can vary widely, they are often categorized into two primary dimensions: transactional and transformational leadership.

Transactional leadership focuses on task-oriented behaviors, where leaders provide rewards and consequences based on performance. In contrast, transformational leadership emphasizes inspiration, vision, and the development of personal growth and potential among team members.

The preferences athletes hold regarding leadership styles are influenced by a myriad of factors, including personal attributes, past experiences, cultural norms, and societal expectations. Gender, as a fundamental social identity, can also shape these preferences (Bass, 985).. Research has indicated that gender stereotypes and societal norms often lead to the expectation that men and women possess different leadership qualities. These expectations can subsequently influence the preferences male and female athletes hold for specific leadership styles.

Historically, traditional masculine traits such as assertiveness, decisiveness, and control have been associated with effective leadership (Doherty, & Stott, 2015). These traits align with transactional leadership behaviors. On the other hand, transformational leader **(**Avolio& Yammarino, 2013).

1.3 Team Cohesion

Team cohesion was measured through various aspects such as interpersonal relationships, communication, and trust. While both genders emphasized the importance of unity, female players showed higher scores in terms of perceived trust and cooperation within their teams. Interviews highlighted that female players often attributed this to enhanced communication skills and mutual support (Eys, Carron, & Bray, 2007)..

Team cohesion is a fundamental aspect that shapes the dynamics and performance of sports teams across various disciplines (Carron, et.al. 2002).. In the realm of athletics, the concept of team cohesion refers to the degree of unity, camaraderie, and shared understanding among team members (Carron & Eys, 2012).. It embodies the synergistic connection that binds individuals together towards a common goal, transcending individual talents to create a collective force greater than the sum of its parts.

Team cohesion in sports extends beyond the mere presence of talented athletes; it delves into the intricate web of interpersonal relationships, effective communication, and mutual trust. When a team exhibits high levels of cohesion, it operates as a well-oiled machine, where each member's strengths complement the weaknesses of others, resulting in seamless coordination during competition (Carron, Brawley, & Widmeyer, 1998).. This synergy is often manifested in synchronized movements, strategic plays, and a remarkable ability to adapt to changing circumstances on the field.

The multifaceted nature of team cohesion encompasses both task cohesion and social cohesion (Eys, Carron, & Bray, 2007).. Task cohesion pertains to the shared commitment to achieving common objectives, while social cohesion focuses on the emotional bonds and camaraderie that develop among teammates. Both dimensions are essential for a team's success, as they contribute to improved morale, enhanced communication, and a supportive environment that encourages each member to contribute their best efforts (Kassing2007)..

However, team cohesion is not an automatic outcome; it requires deliberate effort and continuous nurturing (Spink, Carron, & Loughhead, 1996).. Coaches, leaders, and team members must work collectively to foster an atmosphere of respect, open communication, and mutual understanding. Building and maintaining cohesion involves acknowledging individual differences, resolving conflicts constructively, and celebrating both personal achievements and team milestones (Loughead, et.al. 2016)..

In this exploration of team cohesion in sports, we will delve deeper into its significance, strategies for its cultivation, its impact on performance, and real-world examples of teams that have harnessed its power to achieve remarkable feats. As we navigate the intricate interplay of

personalities, goals, and shared experiences within sports teams, we will uncover the essence of what truly sets exceptional teams apart on the journey toward victory (Filho & Tenenbaum, 2011)..

2. METHODOLOGY

A mixed-methods approach was employed to collect data from a diverse range of team sports. Quantitative data were obtained through self-report surveys administered to male and female players. The surveys covered psychological characteristics (e.g., motivation, self-confidence), leadership preferences (e.g., leadership styles preferred), and team cohesion measures (e.g., perceived unity, trust among teammates). Additionally, qualitative interviews were conducted with select participants to gain deeper insights into their experiences and perspectives.

3. RESULTS

Psychological Characteristics: Analysis of the survey data revealed that both male and female players exhibited similar levels of motivation and self-confidence. However, there were nuanced differences in how they attributed success and failure, with males tending to attribute success more to internal factors and females to external factors. These findings suggest that while both genders are driven and confident, their attributional tendencies may influence their reactions to outcomes.

4. DISCUSSION

The findings suggest that while gender can influence certain patterns in psychological characteristics, leadership preferences, and team cohesion, individual variations are substantial. It is important to recognize that these differences and similarities are not solely determined by gender but are also shaped by socialization, personal experiences, and situational factors. Effective team management should focus on tapping into individuals' strengths while promoting an inclusive environment that values diversity.

6. CONCLUSION

In conclusion, this research provides a comprehensive comparative analysis of psychological characteristics, leadership preferences, and team cohesion of male and female players in team sports. While gender-related patterns exist, the complexity of individual differences should not be overlooked. Acknowledging and leveraging these insights can contribute to creating harmonious and high-performing sports teams, ultimately advancing the field of sports psychology and team dynamics.

7. IMPLICATIONS

Understanding the comparative psychological characteristics, leadership preferences, and team cohesion of male and female players can have several implications for sports teams and their performance (Cotterill, & Fransen, 2016).. Coaches and team managers should be cognizant of both the commonalities and differences, tailoring their leadership approaches and team-building strategies accordingly. Emphasizing open communication, trust-building activities, and recognizing the unique contributions of each player can enhance team dynamics and overall success.

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POTENTIAL OF HYPER-GRAVITY TRAINING TO IMPROVE SPORTS PERFORMANCE IN ENDURANCE ATHLETES

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ABSTRACT

Professional athletes utilized modern methods like hyper-gravity training to improve their performance. In order to improve sports performance, hyper gravity (H.G.) tends to be the only countermeasure 6 that may be utilised to stack or challenge bone, muscle, and the cardiovascular and vestibular systems. In hyper-gravity training, we use weighted vests as a form of wearable resistance that 3 allows an overload to be evenly distributed near an individual's centre of mass, potentially increasing the ability to produce ground reaction forces and power production. Versatile reaction to preparing with high loads has both neurogenic and myogenic components. Hyper-gravity training has a beneficial effect on developing muscle strength, quickness at sprinting, balance, power, agility, and platelet function. Weighted vest training has shown excellent results, with athletes able to increase their performance by 10% after just three to ten weeks of training.

Keywords: Training, Athletes, Male, Groups, performmance, Soccer

1.INTRODUCTION

Among nonconventional power planning systems, heavenly outcomes have been attained with hyper-gravity (i.e., weighted vest) getting ready, where updates of 10% and, shockingly, more have been gotten in 3-to 10-week intercessions in contenders (Bosco et al., 1985). In addition, it is vital that the greater part of the recently referenced hyper-gravity interventions were driven on pre-arranged contenders, in whom reduced planning responses are typically not strange. Adding weighted vesthas shown find success in like manner in fixed and old age in longer involvements. Plus, balance upgrades have been represented in women with postmenopausal. The interventionswith fixed subjects have used added planning programs despite the weighted vests. Because of the valuable thought of the stacking, hyper-gravity planning might conceivably additionally foster

power planning, concerning further creating skill to jump (Rantalainen et al., 2012).

several examinations uncovered that Hyper-gravity further fosters the lower-body power (Barr et al., 2015) that can happen for the subjects of the ongoing survey which helped them during run running.

2. SEARCH STRATEGY

Search was performed at the beginning of feb,2024 on PubMed and google scholars' databases. A combination of keywords and medical subject headings including "Hyper-gravity training", "Resistance training", "weighted vest", "Sports performance", "Resistance training and sprinting speed", "Resistance training and Balance", "Resistance training and Agility", Resistance training and Endurance". The affiliated information in this research project was attained from both review articles and clinical trials published from the year 2001-2024.

As Selection criterion, it was decided that articles involved in the research needed to describe at least 1 possible factor associated with the same. The articles which were written in English.

The search strategy identified 27 potentially relevant articles on PubMed and 38 on Google Scholar amounting to a total of 70 articles. After title and abstract review, only 29 articles were considered relevant and retained for analysis.

3.MECHANICS OF HYPER GRAVITY TRAINING

Hyper-gravity Preparing (HT) that delivers a vague persistent pressure, past the adjustment of the particularity of preparing pressure created by a regular preparation implies followed by a recuperation, expected to create further transformation to improve running speed (Ghosh et al.,2022). Versatile reaction to preparing with high loads has both neurogenic and myogenic parts. Improvement saw toward the start of preparing for hazardous power has been credited to a neurogenic element, while as the preparation proceeds myogenic reaction turns out to be more significant (Bosco et al.,1985) Simultaneously with the reduction in lumbar spinal firmness during HG, an expansion in lumbar muscle action and a levelling of the lumbar shape happened. The expansion in physiological interest with a weighted vest was far more noteworthy in males than females. To be sure, the expansion in VO2 take-up, pulse, and energy consumption was each of the a few times more noteworthy with the weighted vest in men than females. Moreover, these progressions advanced a shift towards more noteworthy carb oxidation in men and a more prominent expansion in blood lactate, just saw in men. While proof proposes that lactate isn't a reason for exhaustion (Robergs, et al., 2004), it is regardless a decent sign of expanded glycolytic digestion and expanded physiological and metabolic pressure in men.

4.RESULTS

The point of this study is to address the inquiry that, can capability of hyper-gravity preparing to further develop sports execution in perseverance competitors is successful. There are extremely restricted examinations zeroing in on the impacts of opposition preparing on solid strength in players. Notwithstanding, it is essential to explain the issue as far as deciding the connection among safe and non-safe plyometric preparing and adjusting the preparation program as per the outcomes. See table 4.1

TABLE 4.1

Author/s	Aim	No. Of Participants	Days/ Weeks	Interventions	Outcome Measures	Conclusion
Eric et al,2016	To find the effect of Hyper gravity training on Sprinting Speed and Shuttle run Performance.	9	Three Weeks	Hyper-gravity Training with Weighted Vest and Non- Hyper gravity training (NHT).	Power clean, Single counter movement jump, four continuous counter movement jumps, shuttle run, ground contact time	Enhanced short running task performance and ground contact time
Macadam et al, 2019	To find Acute and longitudinal effects of weighted vest training on sprint-running performance	113	Eight days to seven weeks	Vest loads used ranged from 5% to 40% BM	Acceleration phase, contact time, effect size, flight time, maximum velocity phase, step frequency, step length, stride frequency, stride length	weighted vest sprinting, contact and flight times were more affected by loading as opposed to step frequency and step length.
Freitas-Junior et al.2019	Effect of weight vests on the internal load in volleyball athletes	18	Six weeks	plyometric training with weight vests (PVG), technical-tactical training with weight vests	Session-RPE method	The use of weight vests with 7.5% body mass was not sufficient to cause differences in perceived Internal Training load therefore, Hyper-gravity training can be proved as a beneficial technique for inproving sports performance.
Rahimi et al.2005	The effects of plyometric, weight and plyometric-weight training on anaerobic power and muscular strength	48	Six weeks	plyometric exercises	t-test Bonferroni post hoc test	time for running the 50 yards had decreased increase in the vertical jump height
Yang et al.2007	Effect of artificial gravity as potential countermeasure to microgravity	14	one week	Electromyographic Kinematics activities of selected joints and muscles	insole force sensors. Hip, knee and ankle angles were measured using electro goniometers	HG squats can produce very high foot forces that are comparable to those produced during 10RM squats
Sidik 2022	The Improvement of Power Endurance and Aerobic through Interval Method by Using Vest Jackets	17	One week	resistance vest jacket	Bleep Test T test Multistage Hurdle Jump Test and aerobic test	increased power endurance and aerobic abilities
Ohsslon-2020	Increased weight loading reduces body weight and body fat in obese subjects	72	Three weeks	Measurement of weight before and after the experiment	Fishers exact test T test U test Body mass index 8h use of the weight vest	High load treatment resulted in a more pronounced relative body weight loss compared

5.DISCUSSION

Performance on the physical plane is correlated with balance, agility, speed, and power. The majority of the time, HT training has been touted as an innovative way to enhance balance control. The traditional methods of implementing strength training involve either resistance training or plyometric training. In a 12-week period, improvements in jumping performance have been roughly 8%, but minimal developmental ichange 9n the performance. Hypergravity training has produced excellent results, with athletes seeing progressions of 10% and higher after three to six weeks of intervention. Moreover, trained athletes underwent hyper-gravity therapies. It has been demonstrated that weight-loaded vests are beneficial for both elderly and inactive people. Furthermore, following a weighted vest intervention, postmenopausal women have shown improved body control. In terms of improving leaping performance, hyper-gravity training compares positively to traditional power training due to the functional character of the loading (Rantalainen et al., 2012).

It was determined that the experimental subjects' improvement was due to their quick adaption to the high gravity field simulation. According to Eric et al. (2016), adaptation has reportedly taken place in both metabolic and neuromuscular systems.collectives During the twelve-week sprint training intervention, both the hyper-gravity and non-hyper-gravity training groups (HGTG & NGTG) better than control group, both with and without the use of weighted vests. 2) However, in terms of sprinting speed, the HGTG outperformed the NGTG by a wide margin (Ghosh et al., 2022).results showing an improvement in direction-changing ability are consistent with those who reported a notable improvement in direction-changing ability. Superior players of men group in the game of soccer were trained through ten weeks plyometric and short sprint training programme (Aloui et al., 2021). It was found that hyper-gravity training with appropriate capacity and strength improved both the jumping performance and the ability to change directions with weighted vest training. An additional advantage in terms of agility should be anticipated by athletes who play ball games. According to the literature currently in publication, wearing a 5-to 10% body weight vest during training sessions has been shown to enhance sports performance. However, overuse injuries have also been documented in female athletes (Rantalainen et al. 2012). Rugby players can improve their running speed and performance with just one week of HT training (Barr et al., 2015). However, it's crucial to realise that improving a player's sprinting speed requires a variety of modifications, including changing the type and length of their sports. But research shows that there isn't an increase in vertical force generation during training (Gleadhill et al., 2021).

6. CONCLUSION

Effect on various components has been absorbed, it is evident that variation in neuromuscular functions and in metabolic processes has been seen that lead to increase in muscle strength.As the load externally is added on the body of the players, the required force for the initiation and execution of a movement increases due to the increased gravity condition of the players on the earth’s surface which increases sprinting speed of athletes.Results of improved agility are reported, enhancement in change of direction ability after loaded and unloaded plyometric and short sprint trainingwere observed, improvedjump performance is caused by neural factors such asintermuscular coordination and more motor unit allotment. Furthermore,use of extra weight during jumping allowed players to apply more force against gravity. This mechanical adjustment generates higher force which increases muscle power. Hence weighted vest seems to be very effective in sports training,

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INVESTIGATING THE EFFECTS OF SCHOOL PHYSICAL EXERCISES AND EXTRA PROGRAM ACTIVITIES ON STUDENTS' SOCIAL BEHAVIOR

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ABSTRACT

Purpose: The physical education and exercise is an integral part of education that is effective in the access to its purposes in different ways. **Methods:** This study is a quasi-experimental research and the population includes all male and female guidance-school students in Northern Savadkooh who were 740 people. The Krejcie and Morgan table was used to determine the sample and 120 girls and 134 boys were selected. To assess the public health, (TISS, Inderbitzen and Foster, 1992) was used. Descriptive statistics methods such as frequency tables and figures as well as the inferential statistics including the Kolmogorov–Smirnov test and Paired-Sample t-test were used to analyze the hypotheses. **Results:**The results indicated that exercise and the extra program activities are effective on the social behavior of the male and female guidance-school students in Northern Savadkooh. **conclusion:** The teachers should pay attention to the direction of skills by the extracurricular activities.

Keywords: Physical Exercise, extra program activities, social behavior, student

1. INTRODUCTION

The physical education and exercise is an integral part of education that is effective in the access to its purposes in different ways.The physical education is a didactic- educative process that aims to improve the performance and growth of the human by the physical activities and with the emphasis which it put on the physical, mental and emotional upbringing and the social propriety.While proper performance, it can play its considerable role in the education and the triple scope of learning namely cognitional, emotional and psychical- motional. In other words, the physical education can result in the access to the purposes such as the improvement of educational function, memory enhancing, preparation for learning, improvement and facilitation of learning, self- confidence, improvement of personal relationships, responsible behavior, independence, skillful movement, physical preparation, active and dynamic life, and effective use of leisure time **(West & Butcher, 1997).**

Based on this, the physical education course is one of the major courses in the most of the schools that is linked to the educational system by the syllabus **(Javadipoor et al., 2006).**

Burga-Falla et al.(2024) showed that the study concluded that extracurricular activities are important for Peruvian elementary students, as they can foster their creativity and boost their academic performance.The appearance of new thoughts and viewpoints of education in the eighteenth century which was the opening of significant evolutions in the education system, more than anything created changes and evolutions in the syllabus viewpoints. The appearance of new concepts such as extracurricular activities was the precautionary answer which was expressed and displayed that schools can have no reaction to the new needs and viewpoints.So,the extracurricular activities were attended along with the formal syllabus so that it can provide the new requirements and requests of the schools **(Esmaeeli, 2008).**

]Sports activities can improve children and adolescents' prosocial behaviors. Different sports activities also influence children and adolescents' prosocial behaviors differently. Moreover, sports activities can improve the prosocial behaviors of children and adolescents with special educational needs **(Jiayu&Weide ,2022).**

The syllabus, in a division, is divided into three categories: compulsory courses, optional courses, and extracurricular activities. A set of activities which are done out of the formal framework of the class is considered to be extracurricular activities **(Fathi, 2007).**

Moriyana et al.(2006) believed that the extracurricular activities are the supplementary activities which are executed under the supervision of the principal. The extracurricular activities are one of the precious cases that can attract the attention of teachers and educators for the purpose of direction and guidance, improvement of the level of learning, and identification and discovery of latent talents of the students.The extracurricular activities are very effective in the sociability and preservation of independence and personality of the students and it is a good chance for the teachers and counselors and specially the cognizant and sympathetic educators and principals that by this way, they can help the students to be sociable with the participation in the different groups and release them of the seclusion **(Shoarinezhad, 1998).**

The extracurricular activities are almost informal activities which are not restricted to the class and even sometimes to the school and are more affected by the amount of interest, experience, attendance and creativity of the teacher and students. These kinds of planned formal activities or the informal ones are named the extracurricular activities **(Seif, 1992).**

The educated persons of today are the managers of future society. If the students participate in the extracurricular activities of the schools and have faith in the vogue methods at the school, they would be qualified and self- made persons in the society. The participation of

students in some of the extracurricular activities can accompany the education with the cordiality **(Zahedi, 2003).**

The formal syllabus stays fixed for several years. Therefore, it cannot perfectly provide the students' needs. If the extracurricular activities were properly selected and planned, they can easily compensate this reversal. Any kind of curricular or extracurricular activity can be beneficial provided that it be changed successively with regard to the scientific and educational findings.Having the social skills is one of the essential necessities of today life. This necessity is in special tangible in the adolescence and youth stages at which the individuals encounter different situations. In this regard, the school and teachers play so important role **(Fathi et al., 2005).**

JI &Zheng (2021) showed that physical exercise has a positive effect on college students MH and social adaptation ability.Colleges and universities could improve their MH and social adaptation ability by arranging appropriate PE.Being sociable is a process during which the child and adolescent accept the norms, roles, attitudes and generally the cultural and social patterns and act on them with satisfaction. Of course, this process, which results in the social development, is not a one-side current in which the society imposes its wishes on the child or the adolescent, but the adolescent him/herself plays a determinative role in the acceptance and doing the wishes of society **(Ganji, 2008).**

The physical education course has an important role in the substantiation of educational purposes for the reason of being consistent with the instinctive needs of the students, and it also covers different educational compasses and affects the students in the physical and psychical and social dimensions. Also, the physical education is a necessary component of education and consists of the planned, selected and purposeful movement experiences.These physical and movement activities provide a chance for the growth and evolution of children with regard to their needs and interests.The most of the education scientists believe that the children need the intensive physical and gestural activities for their favorable growth and developing their physical and mental abilities. So, the match and athletic champions ensure their participation in these kinds of activities. In fact, the exercise provides an opportunity to the individuals so that they can satisfy their instinct and desire to the competition and champion without any danger and express their wills under the terms and orders of the match and acquire the favorable educational interests of their champions and matches, because the individual likes to examine him/herself in comparison with the selfhood and the others and with the access to the success, begin the second efforts and get the excellent stages and the evolution of his/her life, be self- confident, respect him/herself and the other people and by this way, recognize his/her abilities and actuate them to idealism and human borders.

Barbosa et al. (2016) in an article titled School Environment, Inactive behavior and Physical activity in Preschool Children, concluded that the substructure and environment of the school should be considered as a method for the improvement and development of physical activity and the reduction of inactive behavior in the preschool children. According to the results of this research, the children spend about 10 percent of their attendance in the school for the physical activity and are inactive in the remains of time. The hobby room in the internal environment and the park prevent the children's inactive behavior and cause that the children be active in the upper ages.

Wan et al.(2021) found that physical activity has a significant positive effect on students prosocial behavior, and gender and the fathers education are significantly related to prosocialbehavior.The extracurricular athletic activities not only attract the students who do the

athletic activities but also attract the ones who do not participate in these activities. The participation in the extracurricular athletic activities investigates an autonomous motivation toward the exercise because the students, by participating in these programs, begin to valuate and enjoy them. According to the acquired results, the participation in the extracurricular athletic activities is not related to the controlled motivation and the students' being motiveless in the exercise. The special attention should be paid to the girls because they participate less than the boys in the extracurricular athletic activities. Furthermore, the girls generally have less physical activity. From the scientific perspective, it is important to pay attention to this matter that the extracurricular athletic activities are only one of the tools to motivate the students to have an active style of life.

Merkel .(2013) in a research titled Positive and Negative Effects of Exercise on Adolescent Athletes concluded that the expected advantages of the participation of the children and adolescences in exercise are several cases such as the physical, psychical and social development. The first and most important of these cases is that the participation in the athletic activities results in further activity and expenditure of more time. The students who are involved in the athletic activities show the better psychical behavior in comparison with the ones who do not have any athletic activity.

Three separate types of research in 2013 revealed that the individuals who participate in the extracurricular athletic activities, show better proficiency in the conduction of purposes, management of time, controlling emotions, leadership, rationality, social intelligence, cooperation, and self- scrutiny. The adolescent who participate in team- building exercises, are happier than the others and have more self- confidence and less stress and do not display any behavior based on suicide. The adolescents' exercise should be concentrated on the enjoyment and entertainment. The policies and methods applied in the adolescents' exercise should be based on the science. The programs which make the moral patterns should be developed in exercise. The programs which help the establishment of positive and healthy values are of special importance.The six pillars of personality namely reliability, respectability, responsibility, equanimity, surveillance, and civilization can be patterned by the adults who interact with the adolescents.These pillars can be of effective factors in the creation of friendship and cooperation in the friendly athletic societies.

Masooni .(2011) in a research titled Positive Effects of Extracurricular Activities on Students, concluded that the extracurricular activities are the ones in which the students participate and do not interfere with the educational program of the schools. These activities are seen at all levels in schools. The extracurricular activities are completely optional. So, there is no compulsion for the students who are not interested in participating in them. extracurricular activities have positive effects on the education. These effects include the behavior, high scores, fulfillment of school activities, the positive aspects of being a mature individual and also the social aspects.

Hankok et al. (2012) in a study titled Adolescents' Participation and Extracurricular Activities, Effect on Management Skills; concluded that the adolescents' perception of their management skills is affected by the fulfillment of extracurricular activities and the support of parents and the other adults. These findings are effective in the future social and scholastic activities and display the importance of adolescents' management skills at all levels of school and also the effect of the parents' support on the adolescents' perception of the management skills. The teachers should consider the direction of skills by the extracurricular activities. This act provides an opportunity to the apropos development of main skills of adolescents and causes that

they put into action what they have learned. According to the findings of the research, the parents' support for the adolescents who participate in the athletic activities or perform a role of leader or caption, is a vital factor in their perception of their leadership skills in the extracurricular athletic, scholastic and social activities. Also, the girls displayed a better perception of their leadership skills in the athletic activities in comparison with the boys. According to this study, the participation in the extracurricular athletic activities among the girls has much effect on their perception of the leadership skills in comparison with the boys.

Yeob Kim et al. (2012) in a study titled Relationship between School Function and Number of Physical Education Classes Held for Korean Adolescent Students, concluded that the participation in more than 3 classes during a week has positive relationship with the good function of the school and the participation in less than 3 physical education classes in a week has negative relationship with the school function in regard to the Korean adolescent students.

Lanenbourg (2010) in a study titled Extracurricular Activities concluded that the extracurricular activities are regarded as a fundamental and vital of education in America. These activities were included as well in the daily program of schools. The social activities, exercise, and all sportive activities have been changed to a part of not only educational values in America but also in the social life. The extracurricular activities balance the educational programs of schools by the encouragement to learning, completion of educational atmosphere, integration of knowledge and actualization of purposes of collective life. The extracurricular activities have a meaningful relationship with the increase of educational function of female students. Designing the educational courses aims to familiarize the students with the extracurricular activities so that they can be accommodated with their abilities by recognizing the elements of extracurricular activities and endeavor for further efflorescence of the organization.

Sobhaninezhad et al.(2008) in a study titled Specification of Challenges and Methods of Applying Extracurricular Activities of Schools for National Education of Students, concluded that the extracurricular activities have several positive effects such as the mental and psychical development of individuals, increase of personal responsibility and help the individuals to access to an independent personality, consolidation and unity in the society and pluralism. The participation of students in the management of affairs of cantonments, creation of healthy competition between them, the improvement of spirit of cooperation and collaboration by the encouragement of sports and collective activities and the improvement of peaceful symbiosis skills by the instruction of toleration of dissident opinions are important roles of informal activities of cantonments in the national education.

Moore et al.(2020) showed that prosocial behavior plays an important role in an individuals ability to engage in health promoting behaviors, such as physical activity, despite challenges.According to the theoretical discussion and background presented through sports and extracurricular activities, it is expected to help the student's social behaviors . Accordingly, the present study was designed aiming to examine the effects of sports and extracurricular activities on students' social behaviors were designed.

2. METHODOLOGY

2.1 Population

The present study is a semi- empirical research. So, the procedure of this research is of semi- empirical kind and compares the effect of exercise and extracurricular activities on the social behavior of female guidance students with the one of male guidance students in North Savadkooh city. The statistic population of this research is all of the male and female guidance students of North Savadkooh city that are 740 students.

2.2 Sampling Technique

For the purpose of determination of the intended minimum sample size, 254 samples including 120 girls and 134 boys were selected based on Gersi and Morgan Table. The two-stages simple random sampling was applied for the purpose of sampling of the said population. The social skills questionnaires were given to 254 students at the beginning of the academic year as a pre- test. Then, at the end of the semester in the term of April 21 to May 21, the post- test was taken from the same students who have participated in the pre- test and were more active in the extracurricular activities classes.

2.3 Instrumentation

For the purpose of collecting data, the questionnaire has been used as following: the Teenage Inventory of Social Skills Questionnaire (TISS, Inderbitzen& Foster, 1992) with five-choice 39 statements has been applied for the purpose of measurement of public health. The content validity of this questionnaire has been confirmed by the professors of the university, too. Also, the validity of this invoice has been reported 0/90 by Inderbitzen and Foster in 1992. Inderbitzen and Foster have evaluated the convergent validity of Inventory of Social Skills Questionnaire by different ways of comparing it with the information of self- evaluating and evaluation of coevals, and society- evaluating data and identified the recognition validity of this questionnaire by surveying the correlation between the scores of social skills and social desirability, economical-social status and the other materials of paper & pencil testing and the obtained results have shown the convergent validity and recognition validity to be acceptable. The reliability of this questionnaire for the eighth- grade female guidance students in Tehran for the affirmative and negative propositions has been reported 0/71 and 0/68, respectively, by Amini in 1999.

The reliability coefficient for the positive and negative segment of this questionnaire by the use of Cronbach's alpha has been obtained 80/71 and 80/51, respectively. Arjmandi (2004); has obtained the reliability of this questionnaire 0/84 by the use of Cronbach's alpha. The reliability of this questionnaire designed by Inderbitzen and Foster, has been 0/72 for the measurement of the negative segment and the internal consistency has been reported 0/88.

Also, for being more assured, Cronbach's alpha test has been applied for measuring the reliability. For this purpose, at first, an early sample including 30 questionnaires was pretested and then, by the use of the obtained data of this questionnaire and SPSS software, the amount of reliability coefficient of these materials was computed by Cronbach's alpha that amounts of which have been presented in table below-.

Table of coefficients of Cronbach's Alpha

Cronbach's Alpha	Number of observation	Questionnaire
0/825	30	Social behavior

According to the table related to the coefficients of Cronbach's Alpha, it is observed that Cronbach's Alpha of the said questionnaire has been obtained 0/825. This number expresses that the applied questionnaire enjoys a favorable reliability.

2.4 Statistical Analysis

The analysis of data acquired of the present research includes two parts as following:

(A) Descriptive Statistics: The average central indexes and also divergence indexes such as standard deviation would be applied for better description of data

(B) Inferential Statistics: For the purpose of testing the hypotheses of research, the data would be analyzed based on Kolmogorov- Smirnov Tests for determining the normal distribution of data and Two- Sample T-Test by the use of SPSS software.

3. RESULTS

For the analysis of collected data, at first, the descriptive statistics has been presented that studies the demographical variables of the research such as sex and educational grade. Then, the Kolmogorov- Smirnov Tests and Two- Sample T-Tests have been applied in the inferential statistics. Of total statistic population studied in this research that include all the members of population, for two groups of girls and boys, 120 and 134 members and in total 254 members were respectively selected as research sample that the statistic features of population were presented as following:

3.1 Sex Status of Students

The sex status of the students has been presented in the chart 1. As it is observable, the number of female students is 120 members (%47/24) and the number of male students is 134 members (%52/76).

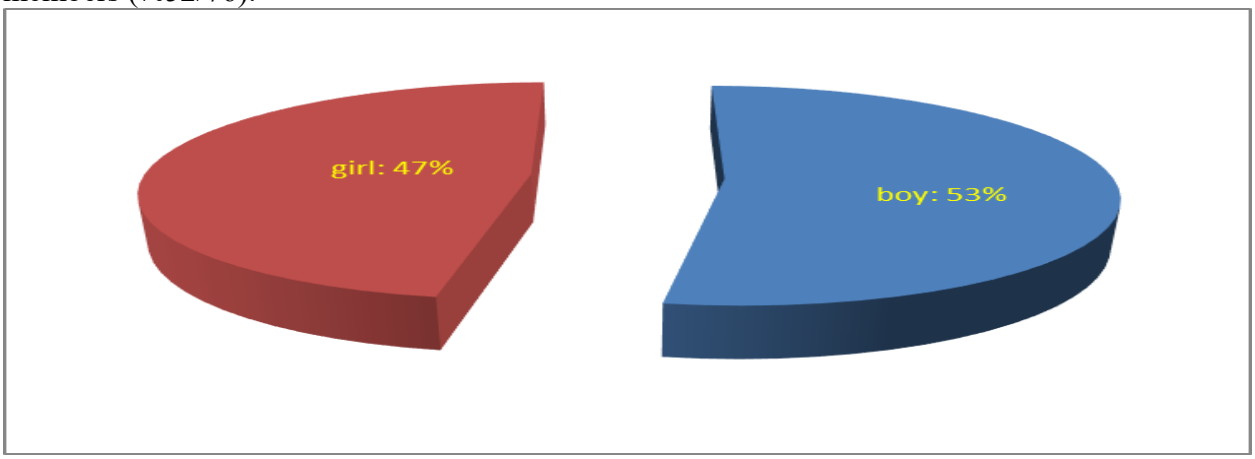

CHART 1: SEX STATUS

3.2. `Educational Grade Status of Students

The educational grade status of the students has been presented in chart 2. As it is observable, of total 120 female students, 27 members (%22/50) are educated at seventh- grade, 44 members (%36/67) at eighth- grade and 49 members (%40/83) at ninth- grade.

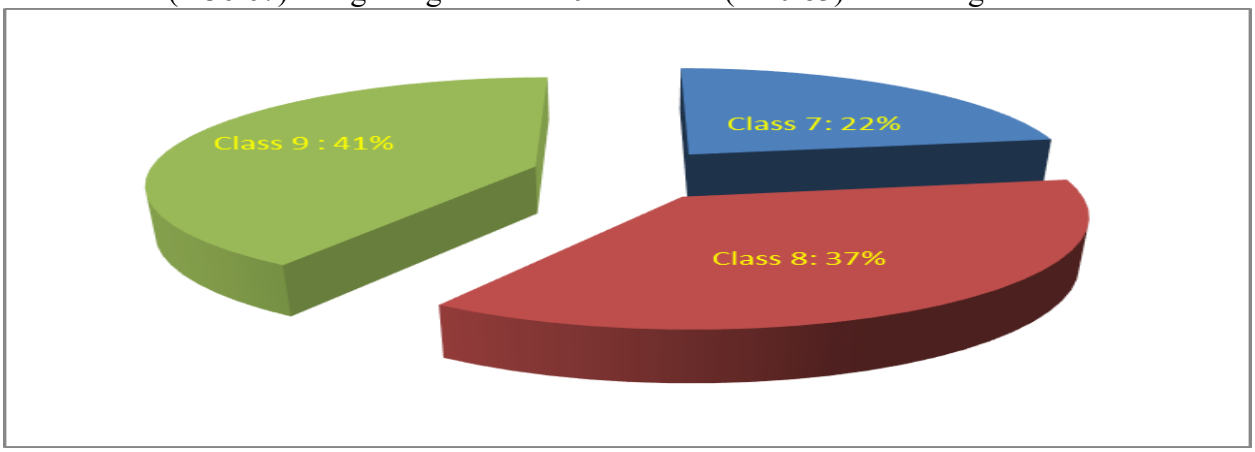

Chart 2: Educational Grade Status of Female Students

3.3 Educational Grade Status of Male Students

The educational grade status of male students has been presented in chart 3. As it is observable, of total 134 male students, 31 members (%23/13) are educated at seventh- grade, 48 members (%35/82) at eighth- grade and 55 members (%41/04) at ninth- grade.

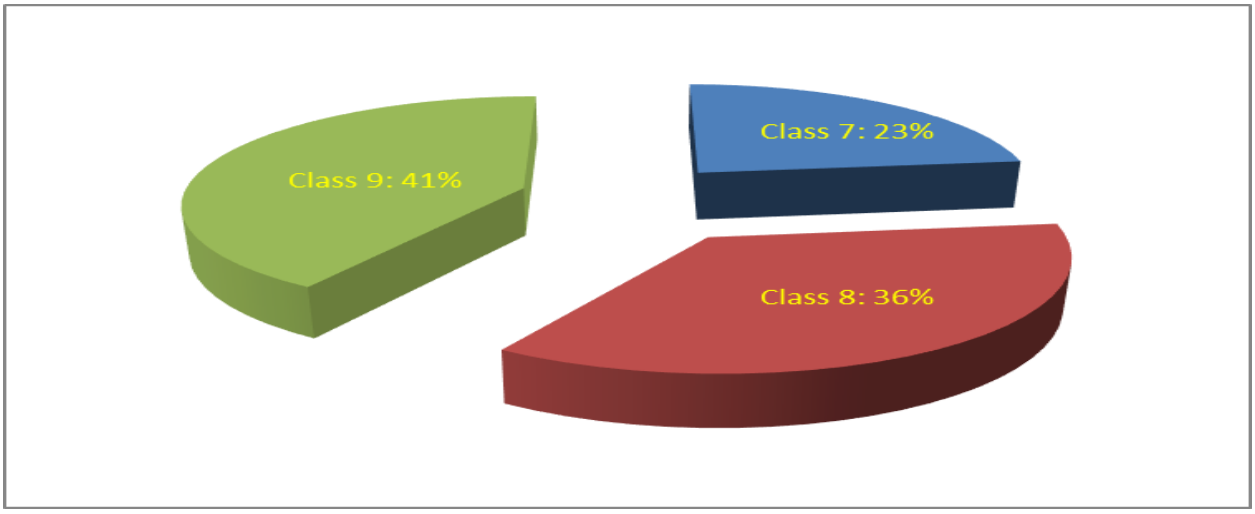

Chart 3: Educational Grade Status of Male Students

3.4 Inferential Statistics-Results of Kolmogorov- Smirnov Test

In the inferential analysis of a research, at first, for the specification of this matter that for testing the hypotheses which one of statistic tests (parametric tests" in a situation of being normal" or non-parametric tests" in a situation of being non- normal") should be applied, it is necessary to study the normality of distribution of research variables. The Kolmogorov- Smirnov Test is used for the purpose of identifying the normality or non-normality of the research elements. The hypotheses of the present research are as following:

$\mathbf{H_0}$ = The distribution of the intended elewment normal

$\mathbf{H_1}$ = The distribution of the intended elewment is not normal

TABLE 1

RESULTS OF KOLMOGOROV- SMIRNOV TEST OF TOTAL SAMPLE POPULATION

Post- test	Pre- test	
254	254	Data Number
2.450	2.116	Average
0.405	0.364	Standard Deviation
0.795	0.854	Kolmogorov-Smirnov Z Ascites
0.437	0.412	Level of Significance

As it is observed, the level of significance of all variables is more than 0/5. So, the result of hypothesis H_0 is accepted. Therefore, the hypothesis of normality of distribution of the related elements in the population is accepted and the parametric dependent T- tests are applied for testing the research hypotheses.

Results of Testing Research Hypotheses

Result of Testing of Main Hypothesis of Research

❋ The physical education course and extracurricular activities have a meaningful effect on the social behavior of male and female guidance students of North Savadkooh city.

The independent T-test has been used for the study of this hypothesis. The results related to the descriptive statistics of students' social behavior before and after the test (exercise and extracurricular) has been shown in Table 2.

TABLE 2
DESCRIPTIVE STATISTICS OF STUDENTS' SOCIAL BEHAVIOR

Variable		Average	Standard Deviation
Social Behavior	Pre-test	2.116	0.364
	Post-test	2.450	0.405

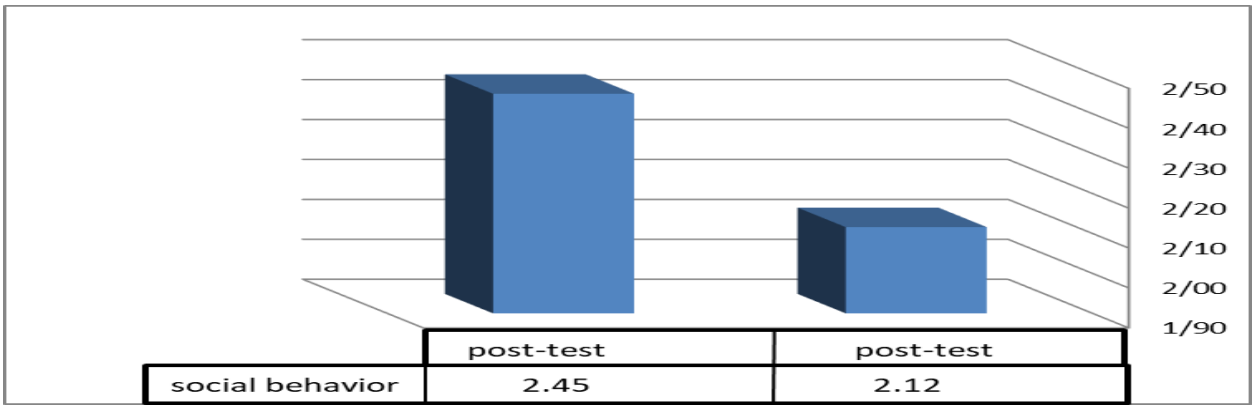

Chart 4: Status of Students' Social Behavior in pre-test and post-test

According to table 2, the average of the status of the students' social behavior after exercising and doing extracurricular activities is more than the average of the status of this variable before exercising and doing extracurricular activities. The dependent T- the test is used for the statistical study of the significance of this difference. Table 3 shows the results obtained by testing the main hypothesis of research.

TABLE 3
RESULTS OF DEPENDENT T-TEST OF TESTING THE MAIN HYPOTHESIS OF RESEARCH

Equation of means test			Pairs difference			
Two-sided significance	Degree of freedom	T as cites	Standard error of mean	Standard deviation	Mean difference	
0.000	253	-10.528	0.031	0.505	-0.333	Post- pre

According to the results of the dependent t-test, the level of significance is lower than 0.05 and the hypothesis of the equation of means of two population is rejected. In other words, there is a meaningful difference between the status of the students' social behavior before and after exercising and doing extracurricular activities. With regard to this matter that the mean of students' social behavior after exercising and doing extracurricular activities more than the mean of the intended variable before exercising and doing extracurricular activities. So, the main hypothesis of research has accepted the exercise and extracurricular activities affect the social behavior of male and female guidance students of North Savadkooh city.

4. DISCUSSION

According to the results of present research, in general, the significance of the effect of exercise and extracurricular activities on the improvement of the status of students' social

behavior has been accepted. In other words, the guidance students of North Savadkooh city displayed further ability in social behaviors after exercising and participating in extracurricular activities. Therefore, the exercise and extracurricular activities are more important and effective factors in the social growth of adolescence period that cause the facility and health of growth and social evolution of students. By doing exercise and extracurricular activities, the adolescents obtain opportunities so that they can assemble with their coevals and homogeneous, select a number of friends among them and learn how to communicate with different individuals and keep this communication healthy and continuous and they find these beneficent facilities and opportunities in the extracurricular activities.

According to the results obtained from the findings of the research, the level of significance of paired dependent t- the test is lower than 0.05. The main hypothesis of research has been accepted and the exercise and extracurricular activities are effective in the social behavior of guidance students of North Savadkooh city. The results of present research favor the results of researches of **Hankok and his coworkers (2012).**

In a research titled Participation of Adolescents and Extracurricular Activities, Effect on Management Skills, they concluded that the perception of adolescents of their management skills is affected by doing extracurricular activities and the support of parents and the other adults. These findings are effective in the future social and scholastic activities, and display the importance of adolescents' management skill at all level of school and also the effect of parents' support on the adolescents' perception of management skills. The teachers should pay attention to the direction of skills by the extracurricular activities. This act provides an opportunity to the apropos development of main skills of adolescents and causes that they put into action what they have learned. According to the findings of the research, the parents' support for the adolescents who participate in the athletic activities or perform a role of leader or caption, is a vital factor in their perception of their leadership skills in the extracurricular athletic, scholastic and social activities. Also, the girls displayed a better perception of their leadership skills in the athletic activities in comparison with the boys. According to this study, the participation in the extracurricular athletic activities among the girls has much effect on their perception of the leadership skills in comparison with the boys. **Bartolom& Papa (2017)** founded that subjects exposed to physical activity exhibit more trust and prosocial behaviors than those who are not exposed.these effects are not temporary. **Lanenbourg (2010)** in a study titled Extracurricular Activities concluded that the extracurricular activities are regarded as a fundamental and vital of education in America. These activities were included as well in the daily program of schools. The social activities, exercise, and all sportive activities have been changed to a part of not only educational values in America but also in the social life. The extracurricular activities balance the educational programs of schools by the encouragement to learning, completion of educational atmosphere, integration of knowledge and actualization of purposes of collective life. So, the physical education teachers should increasingly pay attention to this aspect of the students' growth. **Sobhaninezhad et al. (2008)** also in a study titled Specification of Challenges and Methods of Applying Extracurricular Activities of Schools for National Education of Students, concluded that the extracurricular activities have several positive effects such as the mental and psychical development of individuals, increase of personal responsibility and help the individuals to access to an independent personality, consolidation and unity in the society and pluralism. The participation of students in the management of affairs of cantonments, creation of healthy competition between them, the improvement of spirit of cooperation and collaboration by the encouragement of sports and collective activities and the improvement of peaceful

symbiosis skills by the instruction of toleration of dissident opinions are important roles of informal activities of cantonments in the national education.

5. CONCLUSION

We concluded that exercise and the extra program activities are effective on the social behavior of the male and female guidance-school students in Northern Savadkooh. Therefore, regular exercise and the extra program activities as an effective strategy in informal activities of cantonments in the national education is highly recommended.

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EVALUATION OF FOOT POSTURE INDEX, MEDIAL LONGITUDINAL ARCH ANGLE, NAVICULAR DROP, FOREFOOT ANGLE AND REARFOOT ANGLE IN YOUNG DANCERS: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Research has shown that dancers who practice high-intensity physical routines may suffer from musculoskeletal ailments. The shifted foot position is a primary contributing component to the altered kinematics of the lower limbs. The aim of this study was to look into the young dancers' foot postural abnormalities. Techniques: Based on eligibility criteria, 40 female young dancers from Mandi Gobindgarh's Om Parkash Bansal Modern School were screened for the study. The Foot Posture Index, Medial Longitudinal Arch Angle, Nacular Drop, Rearfoot angle, and Forefoot angle were used to evaluate the subjects' postural abnormalities. Findings: According to a percentile study of the Foot Posture Index scores, young dancers have a higher prevalence of pronated feet (Left 5%, Right 7.5%) and supinated feet (Left 5%, Right 12.5%). The Medial Longitudinal Arch angle variations among young dancers exhibit both a decrease (Left 17.5%, Right 7.5%) and an increase (Left 17.5%, Right 12%) in angle. The majority of the young dancers had increases in their rearfoot angle (about 90%), forefoot angle (approximately 33%), and lateral drop (approx. 35%).Conclusion: The current study suggests that foot postural abnormalities are common among dancers, especially in their early years. Therefore, due to foot posture variations among dancers, preventive and interventional measures must be done to prevent various forms of musculoskeletal problems in the foot.

Keywords: juvenile dancers, foot postural aberrations, one foot issues, and biomechanical

1. INTRODUCTION

Dance is a active, non-competitive form of physical activity and unique art in which human foot plays a very important role to perform various static-dynamic functions within the locomotor system. Proper functioning and efficiency of the foot depends upon the morphological structure and proper shape of the foot **(Gorwa et al., 2021).** Both static and dynamic function of the foot which includes qualities of adaptability during different type of weight bearing activities depends upon four arches of foot which include anterior transverse arch, posterior transverse arch, medial longitudinal arch and lateral longitudinal arch **(Hawes and Sovak., 1994)**.

There are many health benefits of performing various dance activities which includes enormous increase in muscular endurance and maintaining a very low level of body fat **(Merchant., 2013).** Beside various effects on physical health dance activity also have an potential of having positive impact on mental and emotional wellbeing. There are different types of dance forms in the world which differ among different places and culture. In India according to states different dance forms are known like Bharatnatyam, Manipuri, Odyssey, Kathak, Kuchipudi and many more and western dance forms are Hip-Hop, Jazz, Salsa, Locking and Popping, Cabaret, Tap dance, Belly dancing, Ballet, Passo etc **(Merchant., 2013).**

Foot posture plays a vital role in dancer's ability to execute and synchronize with the leg and foot. Foot postural deviations can severely affect the function of lower extremity kinetic chain which enables the risk for musculoskeletal injuries and discomfort among dancers. Most dancers begin their training at a young age, which may cause early postural deviations among young dancers. This can have a significant influence on their future health and according to various research studies there is very less attention paid among dancers as an occupational category **(Cote., 2005).**

According to health literature there is an estimate that approximately 90% of professional dancers will agonise at least one musculoskeletal injury during their career. Different causes of dance injuries include anatomical placement, poor exercise, technical errors, unskilled choreography or style and environmental factors including flooring surfaces which will affect the future fitness of dancers **(Merchant., 2013).** Foot Posture Index is one of the commonly used simple and reliable method which can be used to effectively assess and identify foot postural deviations among dancers **(Sammarco., 1984).**

During various dance activities foot reacts to to these forces by either pronating or supinating the hind foot which is a major factor of causing change in the foot posture. An excessively supinated foot is characterized by a high arch along with hypomobile mid foot and excessive pronation is characterized by flattening of medial arch along with hypermobile mid foot which further place greater demands on the neuromuscular systems to stabilize the foot and maintain upright stance posture **(Merchant., 2013).** So, traditional practices of the dancers need to be carefully studied and compared with the modern system of physical training to understand the predisposing factors and mechanism of injury among dancers **(Macintyre and Joy., 2000).**

2. MATERIALS AND METHODS

Before the commencement of study, a voluntary consent was taken. Total of 40 students (female) was taken in present study as per selection criteria. Population of study included dancers between the age group of 10 to 15 years. The participants were selected from Om Parkash Bansal Modern School

Inclusion Criteria 1. Female dance students of Om Parkash Bansal Modern School. 2. Age group – between 10 to 15 years. 3. Minimum 1 year of Dance Practice. 4. Free style dancers.

Exclusion Criteria 1. Any dance student not willing to participate. 2. Any type of recent Traumatic injury.

3. PROCEDURE

The participants were selected from Om Parkash Bansal Modern School. The various instruments which were required during the study were Universal Goniometer, Foot Stepper, Index Card, Ruler and Marker. Postural Deviations at foot were assessed with the help of Foot Posture Index, Medial Longitudinal Arch angle, Navicular Drop, Forefoot angle and Rearfoot angle which were measured to quantify the biomechanical deviations occurring at the foot.

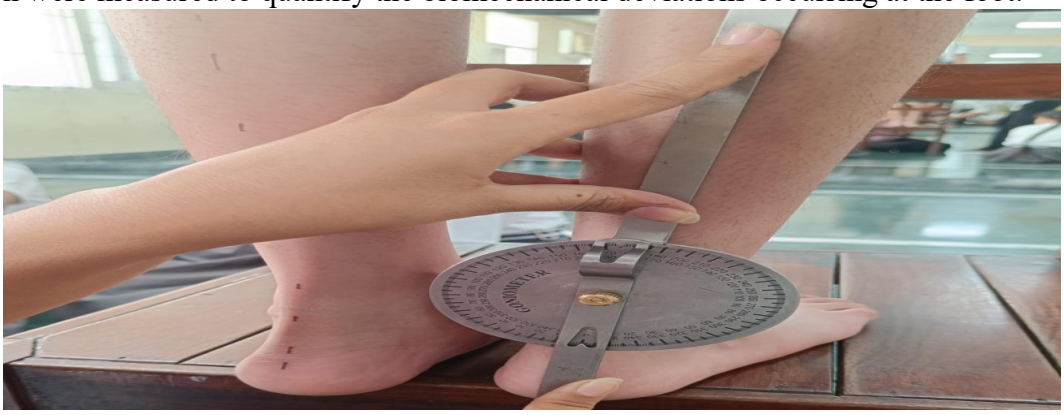

Figure 1 Markings and Placement of Goniometer for measurement of Rearfoot angle.

Figure 2 Marking of Navicular bone on an Index card.

Figure 3 Placement of Goniometer for measurement of Medial Longitudinal Arch angle.

4. RESULTS

Data regarding foot postural deviations among young dancers was analyzed using Microsoft Office Excel 2007. Mean and Standard deviations were analyzed for Demographic details and Percentile was done to analyze the results.

TABLE 1
FOOT POSTURAL DEVIATIONS AMONG YOUNG DANCERS (N=40) (FOOT POSTURE INDEX)

Foot Posture	Highly Pronated	Pronated	Normal	Supinated	Highly Supinated	Total
Left foot	(0) 0%	(2) 5%	(35) 87.5%	(2) 5%	(1) 2.5%	(40) 100%
Right foot	(0) 0%	(3)7.5%	(31) 77.5%	(5) 12.5%	(1) 2.5%	(40) 100%

Table 1 The observations suggested that 5% of dancers showed foot posture deviations towards pronation in the left foot and 7.5% pronation in the right foot where as supinated foot was observed in 5% dancers in left foot and 12.5% supination in the Right foot. Highly supinated left and right foot was observed in 2.5% dancers. Normal foot posture index was observed in 87.5% dancers left foot and 77.5% dancers in the right foot. None of the dancers showed any deviation towards Highly pronated feet.

TABLE 2
DEVIATIONS IN MEDIAL LONGITUDINAL ARCH ANGLE AMONG YOUNG DANCERS

Medial Longitudinal arch angle	Increased	Normal	Decreased	Total
Left foot	(7) 17.5%	(26) 65%	(7) 17.5%	(40) 100%
Right foot	(5) 12%	(32) 80%	(3) 7.5%	(40) 100%

Table 2 The findings suggested that 17.5% dancers showed increase in Medial Longitudinal arch angle at left side and 12% increase in angle at right side. There was decrease in Medial Longitudinal arch angle among 17.5% dancers in the left foot and 7.5% decrease in angle in the right foot. Normal medial longitudinal arch angle in left foot was observed in 65% dancers and 80% dancers had normal angle in right foot

TABLE 3
DEVIATIONS IN NAVICULAR DROP AMONG YOUNG DANCERS.

Navicular drop	Supinated	Normal	Pronated	Total
Left foot	(13) 32.5%	(22) 55%	(5) 12.5%	(40) 100%
Right foot	(14) 35%	(18) 45%	(8) 20%	(40) 100%

Table 3 The findings suggested that 12.5% dancers showed pronated foot at left side and 20% pronated foot in the right side where as normal navicular drop was observed in 55% dancers in left foot and 45% normal navicular drop was observed in the Right foot. Supinated foot was observed in 32.5% dancers in left foot and 35% supination in the Right foot.

TABLE 4
DEVIATIONS IN FOREFOOT ANGLE AMONG YOUNG DANCERS.

Forefoot angle	Increased	Normal	Decreased	Total
Left foot	(13) 32.5%	(25) 62.5%	(2) 5%	(40) 100%
Right foot	(10) 25%	(29) 72.5%	(1) 2.5%	(40) 100%

Table 4 The findings suggested that 32.5% dancers showed increase in Forefoot angle at left side and 25% increase in angle at right side. There was decrease in forefoot angle among 5%

dancers in the left foot and 2.5% decrease in angle in the right foot. Normal forefoot angle in left foot was observed in 62.5% dancers and 72.5% dancers had normal forefoot angle in right foot.

TABLE 5
DEVIATIONS IN REARFOOT ANGLE AMONG YOUNG DANCERS.

Rearfoot angle	Pronated	Normal	Supinated	Total
Left foot	(28) 70%	(12) 30%	(0) 0%	(40) 100%
Right foot	(36) 90%	(4) 10%	(0) 0%	(40) 100%

Table 5 The findings suggested that 70% dancers showed pronated foot at left side and 90% pronated foot in the right side where as normal rearfoot angle was observed in 30% dancers in left foot and 10% normal rearfoot angle was observed in the Right foot. None of the dancers showed any deviation towards supinated foot.

4. DISCUSSION

The present study was conducted with an aim to find out the various Foot Postural deviations amongst Young Dancers. Foot postural deviations were assessed by means of demographic details, foot posture index, medial longitudinal arch angle, navicular drop, forefoot angle and rearfoot angle.

Total 40 female subjects with mean age group of 11.71 ± 0.87 were included in the study. According to height of subjects, the mean height of female subjects was 4 feet. 84 inches ± 0.52.According to weight of subjects, the mean weight of female subjects was 44.55 kg ± 9.72. According to BMI of subjects, 15 (37.5%) female dancers were Underweight and 25 (62.5%) female dancers had Normal weight. None of the subjects were overweight. It was observed that 38 (95%) of female dancers were right side dominant where as only 2 (5%) of dancers were left side dominant. According to total years of dance practice, 13 (32.5 %) of dancers had experience of dance practice of less than 2 years followed by 11 (27.5 %) dancers experience of 2-4 years, 9 (22.5 %) dancers experience of 4-6 years, 4 (10 %) dancers experience of 6-8 years and only 3 (7.5 %) dancers had dance experience of 8-10 years.

The observations suggested that 5% of dancers showed foot posture deviations towards pronation in the left foot and 7.5% pronation in the right foot where as supinated foot was observed in 5% dancers in left foot and 12.5% supination in the Right foot. Highly supinated left and right foot was observed in 2.5%. Normal foot posture index was observed in 87.5% dancers left foot and 77.5% dancers in the right foot. None of the dancers showed any deviation towards Highly pronated feet. This study concludes that foot posture deviations are 12.5% in left foot and 22.5% foot posture deviations in right foot according to foot posture index among young dancers. **Modak et al. in 2023** conducted a study to evaluate foot posture in Bharatnatyam dance form in which it was concluded that Bharatanatyam dancers have increased pronation of foot compared to control group.

The findings suggested that 17.5% dancers showed increase in Medial Longitudinal arch angle at left side and 12% increase in angle at right side. There was decrease in Medial Longitudinal arch angle among 17.5% dancers in the left foot and 7.5% decrease in angle in the right foot. Normal medial longitudinal arch angle in left foot was observed in 65% dancers and 80% dancers had normal angle in right foot. This study concludes that medial longitudinal arch angle deviations in left foot was 35% and 20% subjects had angle deviations in right foot.

The findings suggested that 12.5% dancers showed pronated foot at left side and 20% pronated foot in the right side where as normal navicular drop was observed in 55% dancers in left foot and 45% normal navicular drop was observed in the Right foot. Supinated foot was observed in 32.5% dancers in left foot and 35% supination in the Right foot. This study

concludes that foot posture deviations are 45% in left foot and 55% foot posture deviations in right foot according to Navicular drop among young dancers. As suggested in a study navicular drop in high heel footwear user was found to be more than navicular drop in non-high heel footwear user **(Purnima Kumari et al., 2023).**

The findings suggested that 32.5% dancers showed increase in Forefoot angle at left side and 25% increase in angle at right side. There was decrease in forefoot angle among 5% dancers in the left foot and 2.5% decrease in angle in the right foot. Normal forefoot angle in left foot was observed in 62.5% dancers and 72.5% dancers had normal forefoot angle in right foot. This study concludes that foot posture deviations are 37.5% in left foot and 27.5% foot posture deviations in right foot according to forefoot angle among young dancers.

The findings suggested that 70% dancers showed pronated foot at left side and 90% pronated foot in the right side where as normal rearfoot angle was observed in 30% dancers in left foot and 10% normal rearfoot angle was observed in the Right foot. None of the dancers showed any deviation towards supinated foot. This study concludes that foot posture deviations are 70% in left foot and 90% foot posture deviations in right foot according to rearfoot angle among young dancers. According to **(Fengfeng et al., 2022),** strengthening the lower extremity muscles is also a recommendation to improve muscle coordination and reduce injuries.

5. CONCLUSION

From above observations this study concludes that free style dancing includes constant exposure to the forces on foot which can lead to instability, foot problems, injuries and various types of foot postural deviations among dancers even at young age. Therefore, the study recommends that young dancers should be educated and trained about the foot problems associated with dance activity and various Interventional measures must be taken to prevent various types of musculoskeletal injuries in foot due to foot posture deviations among dancers.

6. LIMITATIONS

This study included all free style dancers as these were only available in the present Geographical area (Om Parkash Bansal Modern School). Further studies can be done among dancers to evaluate the foot posture deviations on the basis of different types of classical and western dance styles.

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EFFECT OF STRUCTURED PHYSICAL EDUCATION ON ACADEMIC ACHIEVEMENT OF ELEMENTARY SCHOOL STUDENTS

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ABSTRACT

The study aims to find out the effectiveness of a Structured Physical Education Programme (SPEP) on academic achievement of elementary school children, and further to explore the differential influence of gender and age of the students on the effectiveness of SPEP on academic performance. The experimental study adopted a pretest post-test design with a control group for collecting data fromsix intact classes (n = 171) of students in the age range 10-12 years, studying in fifth, sixth and seventh grades. Two classes from each grade level were selected, one as control group and the other as experimental group. Pre-intervention and post-intervention measurement of academic achievement was done one weeks before and one week after the treatment with the help of teacher made achievement tests. The experimental intervention comprised of 48 classes each of average 40 minutes duration, delivered at the rate of three classes per week. The success of SPEP on academic achievement was find out by ANCOVA. The gain scores were compared by using t-test and one way ANOVA to find out the influence of gender and age on the success of SPEPon academic performance. The results showed that structured physical education is effective in enhancing academic performance of elementary schoolers. Neither gender nor age of the learner exert any significant influence on the success of SPEP on academic achievement.

Keywords: Structured, physical education, Physical Education Programme, Academic achievement, Differential influence.

1. INTRODUCTION

Physical education (PE) is an important part of children's school life because it enables them to stay healthy, apart from helping them to learn many motor skills and social skills. It can also help them maintain a healthy physique and develop desirable habits and positive attitude towards physical activities. The aim of school-based physical education programme, as envisaged by many educational agencies, is to develop a range of learners' physical competencies, empowering them to perform and appreciate various physical activities with confidence (Aboshkair, 2022; Wiium, 2021). Apart from developing learners' motor skills, physical education comes with a variety of profits such as balanced development of mental, emotional, and social aspects of students' personality (Loras, 2020). It also helps them to maintain healthy habits, abstain from unhealthy habits, sustain mental and emotional health, and cultivate the character and lead a productive life as a responsible citizen (Mondejar-Jimenez, Ceballos-Santamaria, Valencia-Garcia & Sanchez-Cubo, 2022). Students develop a wide range of skills and the capacity to use strategies, tactics, and compositional ideas to perform effectively. A well-organized school PE programme builds learners' ability and confidence to participate in different physical activities which become important part of their lives, both in and out of school (Cerda, Garcia, Cerda & Lee, 2021).

The paybacks of physical education in schools are sweeping, including increased attendance, decreased drop-out rate, better academic performance, better health and leisure, improved discipline, reduced student unrest and so on (Kohl & Cook, 2013). Though school curriculum offers structured physical education as a compulsory subject for children at all grade levels in the state of Kerala (India), it is the most neglected subject as there is no term-end or year-end examination for it. U.S. Department of Health and Human Services (2010) reported that regular physical activity enhances cognitive skills such as concentration, memory and attention which in turn favours desirable classroom behaviour and positive attitude towards learning. Regular physical activity in the school will therefore be successful in improving academic achievement of learners. Researches in recent years have come out with ample evidences to highlight that spending time for physical activities is no more a waste of time, instead it contributes to academic achievement of boys and girls by fostering their mental and physical wellbeing (Barth, Skulberg, Anderssen, Tjomsland& Thurston, 2021; Getu, 2020; Marques, Gomez, Martins, Catunda& Sarmento, 2017).None of these studies, however, has examined the effect of SPEon academic achievement of school students under controlled conditions. In this context, the present study examines the successof a Structured Physical Education Programme (SPEP) on academic achievement of elementary schoolers, and the effect of gender and age on the same.

The study has the following specific objectives -1.To find out the effectiveness of SPE on academic achievement of elementary school children. 2. To find out the effect of gender on the success of SPE on academic achievement of elementary school children. 3. To find out the effect of age on the success of SPE on academic achievement of elementary school children. It was hythesized that the Structured physical education has no significant effect on academic achievement of elementary school children. It was also hypothsized that the gender has no significant influence on the effect of SPE on academic achievement of elementary school children. gain. it was also hypothsized that the as no significant influence on the effect of SPE on academic achievement of elementary school children.

2. METHODOLOGY

2.1. Sample

Children in the age range 10-12 years, studying in grades fifth, sixth and seventh, in elementary schools affiliated to Kerala Board of Public Examination, Govt. of Kerala (India) constituted the population for the study. A total number of 171 elementary school children belonging to six upper primary classes, two divisions each from Standard V, VI and VII (grade levels 5^{th}, 6^{th}& 7^{th}), of aided higher secondary school located in Ernakulam district constitutes the participants of the study.

2.2 Reserch Design

Pretest and posttest research design with a control group was adopted for the study.

2.3 Experimental Intervention

The classes were randomly assigned to the control group and the experimental group in such way that one division each from each grade level was allotted to the groups. The control groups and the experimental groups were pre-tested for academic achievement with the help of teacher made tests administered one week before the intervention. The CGPA converted to percentage was taken as pre-test scores. This is followed by intervention with SPEPfor the experimental groups, while the control groups were left free. Both the groups, however, were not prevented from getting the routine physical education classes as per the school timetable by the school physical education instructor. The experimental intervention comprised 36 sessions of SPE lessons, with each session lasting 40 minutes. The classes were conducted three times per week, from 3.30 pm to 4.15 pm, by competent and experienced physical education instructors.The post-test scores of academic achievementswerecalculated from the CGPAobtained by administering another teacher made achievement test administered within one week after the intervention.

2.4 Tools Used

Two sets of non-standardized teacher made achievement tests in six different subjects, viz., Malayalam, English, Hindi, Mathematics, Science and Social Studies, were used for measuring academic achievement. Each test was for 50 marks and of 90 minutes duration. The achievement tests were prepared, administered and evaluated by the respective school teachers handling the subject. The tests were prepared based on the content prescribed for the first term (pre-test) and the second term (post-test).

2.5 Statistical Techniques

Apart from the estimation of descriptive statistical indices such as Mean, Median, Standard deviation, Skewness, Kurtosis and Standard error of mean, the data were subjected to ANCOVA, independent sample t-test and one way ANOVA.

3. RESULTS

The major descriptive statistical indices such as Mean (M), Median (Mdn), Standard Deviation (σ), Skewness (Sk), Kurtosis (Ku), and Standard error of Mean (SE_M), calculated from the pre-test, post-test, and the gain scores of academic achievementfor the control group (CG) and experimental group (EG) of the students are given in Table 1.

TABLE 1
STATISTICAL INDICES PERTAINING TO PRE-TEST-, POST-TEST- AND GAIN SCORES OF ACADEMIC ACHIEVEMENT OF CONTROL GROUP AND EXPERIMENTAL GROUP

Testing	Groups	N	Range	M	Mdn	σ	Sk	Ku	SE_M
Pre-test	CG	80	31	70.50	70.50	8.12	0.16	-1.08	0.91
	EG	91	34	69.47	70.00	7.25	0.04	-0.70	0.76
Post-rest	CG	80	43	**70.70**	**70.5**	**8.11**	**0.48**	**0.37**	**0.91**
	EG	91	26	**72.32**	**73.0**	**6.05**	**0.02**	**-0.74**	**0.64**
Gain Score	CG	80	23	**0.18**	**0.46**	**4.45**	**0.21**	**0.66**	**0.46**
	EG	91	25	**2.85**	**4.00**	**4.25**	**-0.23**	**0.20**	**0.45**

The descriptive statistical indicesshow that all the distributions are normal as the estimated skewness lies between -½ and +½ and are negligible. The highest score of pre-test of control group is 88 while that of experimental group is 85. The lowest pre-test scores of control group and experimental group are in the order of 57 and 51. The maximum score of post-test for the control group is 98, and that of experimental group is 86. The lowest post-test scores of achievement are 55 and 60 for the control group and experimental group respectively. The mean pre-test score of achievement for the control group and experimental group are 70.52 and 69.47 respectively, while the corresponding mean post-test scores of achievement are 70.70 and 72.32. The standard deviations estimated for the pre-test and post-test scores of achievement for the control group are 8.12 and 8.11; while those for the experimental group are 7.25 and 6.05 in the order. The arithmetic mean computed for the gain scores of control group is just 0.18 while that for the experimental group is 2.85, with their standard deviations in the order of 4.15 and 4.25 respectively.

In order to discover the effect of SPEP on academic achievement of elementary schoolers, the post-test scores of control group and experimental group were compared after partialling out the effect corresponding pre-test score by employing one-way analysis of covariance. The data and result of the one-way ANCOVA conducted in this regard is presented in Table 2.

TABLE 2
ANCOVA OF THE POST-TEST SCORES OF ACADEMIC ACHIEVEMENT OF CONTROL GROUP AND EXPERIMENTAL GROUP

Source	Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected	6114.936	2	3057.468	206.356	.000	0.711
Intercept	587.53	1	587.53	39.654	.000	0.191
Pre-test Score	6003.389	1	6003.389	405.183	.000	0.707
Group	251.444	1	251.444	16.977	.000	0.092
Error	2489.17	168	14.816			
Total	884301.00	171				
Corrected Total	8604.105	170				

a. R Squared = .711 (Adjusted R Squared = .707)

The F-value obtained on comparing the control group and experimental group with respect to the post intervention scores of academic achievement, after taking out the effect of pre-test scores (covariate), is significant at 99.9% confidence interval ($F_{(1,168)} = 16.977$; $p<.001$). Putting another way, there is significant difference between control group and experimental group in the post-test score of academic achievement even after adjustments were made for the

pre-test scores. It exposes that the structured physical education is effective in enhancing the academic achievement of elementary schoolers. The partial Eta Squared value, estimated for the group, shows that ($\eta^2_{patial} = 0.092$), the pre-test scores of achievement exert medium effect on the post-test score of achievement. It also designates that 9.2% of the variance in the post-test score of achievement is explained by the pre-test scores of achievement.

The effect of gender on the efficacy of SPEP in enriching the academic achievement of the participants is examined by comparing the boys and girls with respect to the gain scores of their achievement. The result of the t-test performed in this regard is given in Table 3.

TABLE 3
COMPARISON OF THE GAIN SCORES OF ACADEMIC ACHIEVEMENT OF BOYS AND GIRLS IN THE EXPERIMENTAL GROUP

Group	N	M	SD	SE_M	t	Sig.
Boys	**44**	**3.23**	**4.028**	**0.607**	**0.526**	**NS**
Girls	**47**	**2.49**	**4.462**	**0.651**		

The t-value estimated on comparing the gender groups in the experimental group regarding the gain scores of their academic achievement is not significant ($t = 0.826$; $p>.05$). It shows that there is no significant difference between boys and girls with respect to the improvement they made in their academic achievement when exposed to structured physical education. In other words, the SPEP was equally effective for both boys and girls in making improvements in their studies The effect of age on the effect of SPE on academic achievement of the students was studied by comparing 10-, 11- and 12-years old children with respect to the gains scores of their achievement. The summary of the one-way ANOVA performed in this context is given in Table 4.

TABLE 4
SUMMARY OF ONE-WAY ANOVA: GAIN ACHIEVEMENT SCORES OF CHILDREN IN DIFFERENT AGES.

SOV	SS_S	df	MS	F	Sig.
Between Groups	17.077	2	8.538	0.167	0.628
Within Group	1608.769	88	18.281		
Total	1625.846	90			

The F-value obtained on comparing the gain achievement scores of children in different age groups is not significant ($F = 0.467$; $p>.05$). It shows that age has no significant impact on the effect of SPEP on the academic achievement of elementary school children.

4. CONCLUSIONS

The analysis revealed that structured physical education is successful in improving the academic achievement of elementary school children. This conclusion is arrived at based on the result of the one-way ANCOVA performed to compare the post-test score of academic performance of control group and experimental group, after controlling for the effect of the covariate ($F_{(1,168)} = 16.977$; $p<.001$). The null hypothesis formulated in this context (structured physical education has no significant effect on academic achievement of elementary school children) is, therefore, rejected. Gender has no significant effect on the success of SPE in enhancing academic achievement of elementary schoolers. Both boys and girls were equally benefited from structured physical education in improving their academic performance. This inference was drawn based on the t-value estimated on comparing boys and girls in the experimental group with respect to their gain scores of academic achievement ($t = 0.826$; $p>.05$). The second null hypothesis (gender has no significant influence on the effect of SPE on

academic achievement of elementary school children) is, subsequently, accepted. Age is not a significant factor that discriminate elementary schoolersbased on the improvement they made in their academic achievement when exposed to structured physical education. No significant difference was noticed among children from different age groups with respect to the improvement they made in their academic achievement on account of intervention with SPEP (F = 0.467; p>.05). The hypothesis, "age has no significant influence on the effect of SPE on academic achievement of elementary school children." is, thus accepted.

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