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Identify disparities in anthropometric measurements, Physical variable among volleyball players in Gondia, Maharashtra

Badole Rajendra Haridas[1]*, Dr. Atul Shukla[2]

[1] PhD Student,Kalinga University, Raipur (CG)

[2] PhD Guide, Dept. of Physical Education, Kalinga University, Raipur (CG)

Abstract- ***Sports have become a popular and effective way to achieve developmental goals due to their widespread appeal. PE programs often incorporate sport-specific instruction, which helps students grow physically, emotionally, socially, and morally. Sports and competitive games are essential for social advancement and gaining admiration from peers. Playing a sport involves engaging in physical activity with the goal of winning, improving performance, or having fun. Different types of sports have unique methods and abilities required by each team. Cultivating the capacity to play with excellent skill and consistently perform well is crucial for fitness and sports. General athletic ability and motor ability are interchangeable, with motor abilities such as power, speed, agility, balance, and reaction time being essential for players. In developed countries, there is a strong emphasis on motor learning or skill development among children, leading to higher levels of general fitness. Physiological factors, such as vital capacity and blood pressure, can influence both the volleyball player and the game. Every volleyball team needs to monitor each player's physiological profile, while mental health measures like anxiety levels can impact their performance. Physical fitness measures, such as explosive strength, endurance, and agility, also impact volleyball players and the game itself. This research aims to analyze volleyball players' skills based on anthropometric, and physical variable. The study will focus on 25 volleyball players from Gondia, Maharashtra, who compete at the intercollegiate level.***

Keywords - Anthropometric measurement, Physiological factor, Physical fitness, Volleyball.

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INTRODUCTION

Sports have become a crucial component of physical education, as they provide a simple, low-cost, and effective medium for achieving essential development goals. Participation in competitive sports and other games can improve physical fitness, interpersonal skills, and moral character. In today's society, sports and games play a central role in people's lives and every aspect of society. Different sports require different sets of individual or team talents, and they also compete in different ways. Fitness and sports go hand in hand, so it is important to hone one's skills to compete at a high level on a regular basis. Sports are defined as activities with a high level of intensity and competition. Every sportsperson must meet and maintain the minimum required sports anthropometric, physiological, psychological, and physical fitness profiles to learn and actively engage in the chosen sport. In a team sport, the success of the team depends on the individual contributions of each player. Each player is unique in terms of their looks, behavior, and physiological appearances. There are a wide variety of games, each calling for a specific set of skills and personality traits from its players. The nature of the game, the playing field, the weather, the number of players, the game's length, and the strategies & tactics employed all have an impact on these factors (Sudhakara 2018)

Voleyball is a popular team sport that requires a combination of anthropometric, physiological, psychological, and physical fitness characteristics. Anthropometric methods are used to collect data on a player's physical build, while paper-and-pencil examinations can evaluate a player's physiological & psychological attributes. Numerous professional sports milestones are attainable by players with the right combination of anthropometric, physiological, psychological, and physical fitness characteristics. In volleyball, the court is rectangular with two equal halfs separated by a net. A maximum of six players may represent a single team within the court's boundaries. Volleyball matches must be played to a score of 25 in sets per the rules. A team is declared the victor if they take the match in the best of five sets, regardless of how many sets were played (Mishra 2015**).**

The value and utility of anthropometric, physiological, psychological, and physical fitness variables are essential for volleyball players and their places on the court. Knowing the anthropometric profile state of a volleyball player is vital as it helps them maintain a healthy body. Physiological variables such as vital capacity & blood pressure can affect a player's performance on the court, while psychological metrics like anxiety assessment are crucial for maintaining a strong mental game. Physical fitness metrics including explosive strength, endurance, and agility can also affect volleyball players and the game itself. In conclusion, sports play a significant role in physical education, providing students with opportunities to improve their physical fitness, interpersonal skills, and moral character. By conducting research and analyzing various factors, physical education can continue to evolve and benefit students in today's competitive world (Taware et al. 2015)

VOLLEYBALL

A person's playing abilities or specialized skills are crucial to his or her success in any sport or game. In everyday life, "skill" can be defined as "knowledge or expertise," but in the realm of physical education, it is the "ability to execute certain activities or movements with control & consistency, bringing about desired results." Learning a new skill requires a lot of practice since it necessitates precise motor control and coordination. Volleyball calls for a wide variety of instantaneous movements & reflexes, including arm pass, fore arm pass, blocking, smashing, and defanging. Humans have been looking for the magic bullet that will make them into superhuman athletes ever since the first games were ever played. The integration of new strategies, tactics, and play styles has led to a dramatic growth in the world of sports & games. The scientific data shows that the needs of a certain sport or game are unique to that endeavor. Depending on the sport, the duration, intensity, and level of skill execution, the activity places different demands on the individual (Singh et al. 2016)

Volleyball is a worldwide popular game and ranks third as a recreational team sport. It is one of the few popular games that originated from the United States. In this game, your goal is to prevent the ball from reaching the floor while it flies back and forth over the net. Physical attributes, fitness levels, & performance traits may all operate as physical limits on technical performance at higher skill levels. Volleyball is an Olympic Team Sport in which two teams of six active players, separated by a high net, each trying to score points by trying to ground the ball on the other team's court under organized rules. The complete rules of volleyball are extensive, but in general, play proceeds as follows: Points are scored by grounding the ball on the opponents' court, or when the opponent commits a fault. The first team to reach 25 points wins the set and the first team to win three sets wins the match. Teams can contact the ball no more than three times before the ball crosses the net and consecutive contacts must be made by different players. The ball is usually played with the hands or arms, but players can legally strike or push (short contact) the ball with any part of the body. Spiking the ball is easy to hit and has a fair advantage that the other team will not be able to hit back.

Volleyball is a team game where six players in the court will play as a unit and not like machine. Volleyball is considered as a top level competitive sport played in more than sixty countries and more than sixty million people. The game of volleyball was invented in 1895 by William G Morgan who worked for the Y.M.C.A in Holyoak, Massachusetts. His early form of the game was designed to provide mild exercise for large groups of businessmen. At first, Morgan tried on Tennis to these people, but the problem of purchasing rockets and materials paved the way for the invention of volleyball. However, the Tennis net was first used to raise it to a height of six feet over which a Basketball bladder was volleyed. Since the bladder was too light and the flight over the net was rather slow, he used the Basketball but it was too large and heavy to volley over the net. A proposal for manufacturing a ball that was neither heavy nor big as Basketball was given to splading and brothers with definite specification. The resulting ball that was smaller and lighter than Basketball and then the net was also approved (Li, 1995).

ANTHROPOLOGY

Anthropology, derived from the Greek words 'Anthropos' meaning'man' and'metreein' meaning 'to measure', is a discipline concerned with the measurement of an individual's body in various morphological perspectives. It is applicable to movements, factors affecting movements, body building, body composition, specific abilities, cardio-respiratory abilities, physical and recreational activities, and highly focused sports performances. Anthropometry is a border between movements and anatomy, allowing for the measurement of series of body parts and making predictions on body compositions.

Anthropometry is crucial in sports, as it helps in coaching athletes to achieve excellent performance in various sectors of sports. It considers individual differences, evaluates each subject relative to their structural differences, and determines their potentialities in light of those structural characteristics. For optimal performance during elite level play, various areas must be addressed, including high skill level, flexibility, muscular strength, endurance, and the specific use of anthropometric measurements (Heights & Weight).

There is a profound positive relationship between performance in sports and the anthropometric aspects of an athlete's body. Different sports or events in a same sport require different bodily characteristics, and the player's anthropometric dimensions, reflecting body shape, proportionality,

and composition, play a major role in determining the potential for success in chosen sports.

PHYSICAL FITNESS

Physical fitness is crucial for happiness and success in life, as it allows individuals to maintain a healthy, well-rounded lifestyle. It involves making the most efficient use of available resources in daily life and is directly proportional to the frequency with which one engages in physical activity. Ancient humans had strong health due to the process of battle, which included strenuous exercise. Fitness is defined as the state of being able to express whole expression across the body, mind, emotions, community, and spirit.

Physiology plays a significant role in achieving peak performance in sports, as it helps improve training, performance, and injury recovery. Factors such as heart rate, blood pressure, and temperature are monitored to gauge a player's physiological response to drills. A person's level of physical fitness is determined by their ability to perform voluntary labor and motor and sporting abilities.

The President's Council on Physical Fitness and Sports ranked cardiovascular endurance, muscular strength, and muscular strength as the most important aspects of physical fitness. Additional motor performance components, such as agility, speed, flexibility, or balance, were later added to physical fitness. Kansal (1981) defines physical fitness by a set of five factors: flexibility, freedom from obesity, cardiovascular endurance, muscular endurance, and strength.

Physical fitness is defined by increasing stamina and motor control, allowing individuals to do more with less effort, run faster and more efficiently, and recover from exhaustion more quickly. Impaired physical capabilities can impair mental tasks. Physical fitness is crucial for excelling in sports and reaching one's full potential. A player's performance level is directly proportional to their level of fitness, and to achieve higher levels of performance, players need to focus on improving their fundamental physical abilities through skill training. Sports theory and practice emphasize the importance of motor skill in athletic accomplishments (Taware 2020).

MOTOR FITNESS

Athletes' capacity to execute their sport well is known as motor fitness. Speed, agility, balance, coordination, power (speed plus strength), & response time are the components that make up motor fitness. The capacity to carry out physical tasks efficiently is known as motor fitness, and it is essential for athletes and other athletes-to-be. There are many facets to an athlete's motor fitness, yet they all work together to ensure peak performance. A training regimen that incorporates all five is necessary to improve motor fitness. A person's level of fitness can take numerous forms. Flexibility, speed, stamina, & strength are a few examples. Athletes should prioritise improving their heart fitness level above all else. Athletes need to know the different kinds of fitness so they can tailor their training to improve certain areas that are lacking or crucial. Motor physical fitness encompasses a wide range of abilities, including quickness of movement, balance, power, agility, or response speed, and how well an athlete performs in their sport. Training for any of these qualities will indirectly improve this type of fitness. There are five parts to motor fitness, and they all need to be in place for an athlete to compete at a high level (Benefice, et al., 1996).

The capacity to swiftly change direction is what the body means when we talk about agility. One way to put it is as an athlete's ability to quickly change directions while playing a game. One common way to train agility is to run quickly between cones set at different angles. Due to the impossibility of directly observing coordination, it is more challenging to characterise than agility. The ability to effectively & controlledly combine all types of fitness, not only motor fitness, is a hallmark of a highly coordinated athlete. An athlete's efficiency in competition is directly proportional to his or her level of coordination. Power is the capacity of an athlete to make a powerful, explosive motion by contracting their muscles. Power and its significance in athletics are concepts that most people understand intuitively. Great athletes are more than just physically powerful. Their strength is put to good use in a flash. Another crucial aspect of motor fitness is response time and balance. An athlete's reaction time is the rate at which they can adapt to new circumstances, whereas balance is the capacity to manage the movements of their body. Every athlete who aspires to peak performance should work to improve their motor fitness across the board (Benefice, et al. 1996).

The state of the motor is crucial in high-performance and performance sports. The focus is on the athlete's body adjusting to increasing mental & physical demands, in which every part plays a role. Volleyball as it is today demands a vast array of skills from its players because to the high-intensity motor movements that define the game. Volleyball players rely on practically every skill and trait imaginable to succeed on the court. Athletes need both general and particular motor skills to complete specific motor assignments and maintain spatial orientation; they also need speed & agility to solve game circumstances efficiently. Important components of the game that contribute to the team's strong performance include motor ability, sprinting, & jumping (Singh 2016)

A volleyball player needs strong, powerful, & endurance muscles; they also need to be quick on their feet, nimble in their motions, and able to jump high (She, 1999). Sprinting, jumping (both blocking or spiking), and performing high-intensity court

motions regularly during competition also puts a significant strain on the neuromuscular system (Hakkinen, 1993). In today's volleyball game, quickness & adaptability are the newest trends. An athlete's "versatility" depends on his or her ability to serve, set, spike, block, & defend at a high level, in addition to being well-prepared for their assigned position. Being able to get to the best spot on the court fast is a must for "speediness" athletes. Modern volleyball is characterised by its suddenness, which is the result of a combination of speed & agility in tactics (Huang, 1992).

Speed & power, as measured in activities like jumping & spiking, are among the most crucial physical performance measures. In example, the execution of strategies and tactics is highly dependent on jumping height (Jin et al., 2007). The Japan Volleyball Association found that a player's competitive ability was significantly correlated with their vertical leaping index. According to Tian (2006), there was a favourable relationship between jumping ability & total success rates of spiking, blocking, and serving as well as the amount of spikes in a game. According to anthropometric studies, volleyball players tend to have the following physical traits: tall stature, relatively long limbs, shorter sitting height, higher lean mass, wider hand, narrower pelvis, longer calf, slimmer ankle, longer Achilles tendon, and wider but not longer feet (Tian, 2006).

LITERATURE REVIEW

Govind B. Taware et al. (2013) Ball games necessitate not just physical, but also technical, cerebral, and tactical prowess. Among these, players' physical abilities have a significant impact on both individual performance & team strategy. As a result, athletes need certain skills to handle the rigors of their sport. Volleyball is a widely played sport around the globe. The performance of Indian volleyball players is, unfortunately, significantly behind that of their foreign counterparts. The Study's Objectives: The purpose of this study was to evaluate volleyball players' flexibility, muscular endurance, power, and cardio-respiratory endurance & compare their results to those of age-matched controls. As an added bonus, we'll be able to compare the volleyball players' results to international standards based on the existing literature and offer some advice for boosting their game. Substances and Techniques: The study included forty male controls of the same age or 40 male volleyball players ranging in age from seventeen to twenty-six. Results from the flexibility, muscular endurance, power, & cardio-respiratory endurance tests were analysed using the unpaired t-test. All metrics of physical fitness were much higher in the players compared to the matched controls, but when compared to global standards for top-tier volleyball players, our individuals fell short. Volleyball players, in conclusion, have the upper hand in terms of agility, muscular endurance, power, & cardiorespiratory endurance.

Mishra and Vishan Singh Rathore (2015), investigated what factors influence a volleyball player's skill level on the court. In all, 48 male students representing various institutions of RMLAU, Faizabad were selected for the intercollegiate event. The ages of the identified subjects varied from eighteen to twenty-five. With the help of three volleyball specialists, we used standardised tests to quantify the physical fitness components and a subjective rating scale to assess performance during the play. We used the coefficient of correlation to see how the independent variables were related to the dependent variable (performance). Using the multiple correlation method, we investigated how the predictor variables worked together to estimate performance. For the purpose of making performance predictions using these anthropometric characteristics, a regression equation was also developed. The results showed a strong correlation between the players' weight, height, arm length, and thigh circumference and their volleyball performance. Performance is not significantly related to upper arm circumference or leg length.

Singh et al. (2016), there is a connection between certain anthropometric factors and the way volleyball players perform. As part of this study, 36 participants from the North Zone Interuniversity Volleyball Tournament were selected. Vernier and skinfold callipers were used to evaluate the aforementioned anthropometric parameters. During the competition, the subjects' performance was evaluated based on their striking ability. To analyse the inter-correlation, the product-moment technique was employed. There was a favourable and statistically significant link between volleyball performance and body diameters such as biacromial, bicristal, and elbow diameters. There was a favourable and statistically significant correlation between volleyball performance and skinfold metrics such as subscapular and suprailiac. Results showed that calf skinfold measurements, subscapular biceps, biacromial and bicristal diameters, and elbow and subscapular measurements all had a substantial impact on volleyball performance.

Sudhakara et al. (2018) examined the correlation between anthropometric measures and the speed capability of male collegiate football players. Thirty football players from the Shri Devi Group of school in Tumkur, Karnataka, who competed for their college in an intercollegiate event, were chosen by the examiner. They were between the ages of 18 and 25. A 50-meter dash run test was used to measure speed ability, & anthropometric parameters such as body weight, standing height, leg lengths, thigh girths, and calf girths were measured using gullick tape. The scores were recorded in centimetres. We used Pearson's Product Moment coefficient analysis to see at how agile people were in respect to those anthropometric characteristics. Football players' calf girth was not significantly related to their speed ability, however there was a strong association between the aforementioned anthropometric

characteristics (height, weight, leg length, and thigh girth).

Kusdinar et al. (2019), Volleyball playing abilities can be predicted using anthropometric measurements. In this descriptive survey-method correlation study, 35 athletes, ranging in age from 20 to 22, were recruited from different institutions in West Java, Indonesia. A battery of tests measuring height, weight, and agility, as well as a test of volleyball skills, were administered using GPAI. The methods of regression and correlation analysis were employed. The study compiled data showing a connection between volleyball players' anthropometrics and their performance on the court. These findings demonstrate that anthropometric measurements contributed 49% to the enhancement of volleyball players' playing abilities. An analysis was conducted using a regression model, and the results show that anthropometric characteristics are good predictors of improved volleyball playing ability.

Dr. Krishnendu Pradhanv (2020) Among east zone inter university male volleyball players, an attempt was made to compare positional variations in biomotor motor ability. Fifty-six male volleyball players (N=56, mean age: 23.211.56 years) were randomly picked from the east zone inter university volleyball tournament in 2014. According to their roles on the court, the players were divided into four groups: middle blocks (N=14), outer hitters (N=18), liberos (N=12), and setters (N=12). Karada Scan; Body Composition Monitor measurements of the athletes' body compositions were taken to provide a basic descriptive sample indicative of how they performed in each position. Volleyball players' biomotor abilities were evaluated using a battery of standardized tests, including the standing broad jump, the medicine ball put for six pounds, the 50-meter dash, the 600-yard run/walk, the sit-and-reach test, & ball transfer test for eye-hand coordination and flexibility. Mean differences between the groups were determined using ANOVA. The significance level was determined to be 0.05. Explosive leg strength, explosive shoulder strength, speed, endurance, & flexibility were all found to differ significantly among positions. There are no major distinctions in eye-hand synchronization between the various positions on the court. The findings of this study will be useful for volleyball coaches and trainers in developing practice plans that take into account players' biomotor skills in relation to their location on the court. Therefore, further studies are needed to comprehend better talent identification && team selection in volleyball, taking into account the responsibilities & requirements of different positions.

METHODS AND METHADOLOGY

Research Design- The anthropometric, physical fitness attributes of volleyball players will be used in a final research design as selection criteria for playing ability. A total of 10 tests measuring anthropometry, physical fitness, & physiological variables were administered to twenty-five youth volleyball players as part of this study. Improving the participation rate requires procedures to reduce the number of exams in a shorter amount of time, which are still being investigated.

Selection of Subject

The primary purpose of this research is to analyze volleyball players' skills. The analysis will depend on certain anthropometric, & fitness characteristics. This research will focus on 25 volleyball players from the Gondia, Maharashtra who compete at the intercollegiate level. All of the participants had played volleyball for at least two years before being chosen. Volleyball players between the ages of 18 and 25 are observed and their results will be monitored.

Collection of Data

The methods will have used to collect information about certain anthropometric, physical, & physiological fitness attributes of varsity volleyball players will be outlined in this field. In order to accomplish this research's goals, it is necessary to obtain permission from team members, tournament committee directors, & coaches. Time and date of administration will be determined after permission is granted.

Test Administration

1. Anthropometrical Attributes

- **Body Weight**

Purpose: In order to determine the players' weight.

Equipment required: A device that measures weight electronically.

Procedure: The individual maintains a static position, hands resting side by side. Before the test begins, please remove your shoes and any loose clothing. To get an estimated figure, you may weigh several identical or very close garments before the measurement and deduct them from the total mass on the scale. In most cases, the mass in very little clothes was adequate precision. Make sure the scale reads zero. The subject stands unsupported in the centre of the scales, distributing their weight evenly on both feet.

Scoring: In kilogrammes, note down the player's weight as shown on the machine.

- **Standing Height**

Purpose: To find out how tall the players are when they stand.
Equipment required: Stadiometer.
Procedure: In order to stand for the stretch stature procedures, the individual had to touch the scale with their upper back, buttocks, and heels all at once. It is not necessary for the head to touch the scale when it is set in the Frankfort plane. When the notch above the tragus of the ear and the orbitale, the lower edge of the eye socket, are in the same horizontal plane, this is called the Frankfort plane.
To guarantee that the subject's jaw line was parallel to the measuring device, the observer positioned their hands sufficiently apart to apply upward pressure via the mastoid processes. As the subject is asked to inhale deeply and hold their breath, the measurer will gently elevate their head upwards through the mastoid processes, ensuring that their head remains in the Frankfort plane. The recorder forcefully lowered the head board down the vertex, squeezing the hair to the maximum extent. The recorder also helped by keeping an eye on the feet to make sure they didn't lift off the floor and the head to keep it in the Frankfort plane. At the conclusion of a long inhalation, the measurement was recorded.
Scoring: In centimetres, the subjects' standing height was measured.

- **Arm length**

Purpose: It is necessary to measure the players' arm lengths.

Equipment required: Anthropometric tape.

Procedure: Standing with arms relaxed by their sides, the individual took a calm posture. Make sure you pronate your right forearm. This length was the arm's actual length. While holding one end of the calliper on the Acromiale, the other end was placed on the dactylion, which is the mettle finger. Employ a big sliding calliper to make sure the branches are long enough to clear the Deltoids.

Scoring: The maximum length of the arm was measured in centimetres and recorded as a score.

- **Leg length**

Purpose: In order to determine the players' leg lengths.

Tools necessary: Anthropometric measuring tape.

Method: The participant stood up straight, with their feet together and their arms relaxed at their sides. Here we can see the leg length. Standard procedure involved positioning the individual on the box, with the anthropometer's base or fixed branch atop the box, and the moving branch positioned on the indicated Iliospinale laterale site. Always maintain a straight line when holding an anthropometer or segmometer. One possible tool for this task is a spirit level. The next step was to measure the distance from the Iliospinale laterale to the top of the packaging.

Scoring: A score in centimetres was recorded for the maximum leg length.

2. MOTOR FITNESS ATTRIBUTES

- **peed (50 m run)**

Purpose: To Measure subject speed.

Tools required: a flat, open surface measuring at least 70 metres, a stopwatch, and a measuring tape or designated track.

Method: Participants were required to time themselves as they ran a single maximum sprint over 50 metres. It is important to provide a comprehensive warm up that includes practice starts & accelerations. Get into a standing position where your hands aren't touching the floor and place one foot in front of the other. Always keep your leading foot positioned behind the starting line. The starter says "set" and then "go" after the subject is ready and unmoving. In order to maximise speed, the tester should give participants tips and remind them not to slack down until they cross the finish line.

Results: We measured the best time to the closest 1/100 second after two attempts.

- **Agility (T Agility Run)**

Purpose: In order to evaluate the subjects' running agility.

Tools: Instruments for measuring length, positioning markers, and stopwatch

Procedure: Put the four cones that measure 5 yards (4.57 m) and 10 yards (9.14 m) in their proper places. At cone A, the topic begins. The subject is to dash to cone B and use their right hand to touch the base of the cone as soon as the timer beeps. Subsequently, they pivot to the left, shuffle diagonally to cone C, and touch its base with their left hand once again. Afterwards, shuffle to cone D on the right side and use your right hand to touch the base. The next step is to run backwards to cone A, touch cone B with their left hand, then shuffle back to cone A. As they go past cone A, the stopwatch is halted.

Scoring: Failing to touch the base of the cones, shuffling with one foot in front of the other, or failing to face forward during the test will result in the trial not being scored. The best of three successful attempts were recorded, with a precision of 0.1 seconds.

- **Standing broad jump or Leg explosive power**

Purpose: The purpose of this test is to determine the leg's explosive power.

Tools needed: a mat and a measuring tape. Space on the ground or a designated jumping area in the garden.

Method: With their feet slightly apart, the athlete stands behind a line placed on the ground. A two-foot landing and takeoff manoeuvre was employed, with the pilot propelling themselves forward with a combination of arm swings and knee bends. The participant tried to land safely on both feet after jumping as far as they could. You are permitted three chances.

For scoring purposes, the distance was measured from the takeoff line to the closest landing touchpoint. Jot down the maximum distance leapt, taking into consideration the best of three tries.

- **Stork Stand or Balance**

Purpose: As a means of testing stability while standing on the ball of the foot.

Equipment necessary: a surface that won't slide, a timer, paper, and pencil.

Procedure: Step one: take off your shoes. Step two: put your hands on your hips. Step three: put your nonsupporting foot up on the inside knee of your supporting leg. The participant has one minute to work on their balance. In order to find their footing, the individual lifts their heel. Initiation of the stopwatch occurs upon heel lift from the floor. If any of the following happens, the stopwatch will be stopped:

- Raise the hand(s) from the waist
- You can hop or swivel the supporting foot in any direction.
- The knee stops making contact with the foot that isn't supporting it.
- The ground is touched by the supporting foot's heel.

Scoring: The entire duration is noted in seconds. This is the best of a three-shot competition.

- **Alternate Hand Ball Toss Test for Coordination**

Purpose: To assess the degree of hand-eye coordination

Equipment necessary: a tennis ball, a wall that is both smooth and substantial, markers, & stopwatch.

Method: With a certain distance from the wall marked (e.g., 2 metres or 3 felt), the individual is to stand behind the line with their back to the wall. The player uses one hand to throw the ball underhandedly against the wall, while the other hand tries to catch it. The ball is subsequently returned to its original position and caught using the first hand. There is a 30-second time limit on the exam.

Scoring: The number of successful catches in a 30-second period is used to score the wall toss test, as shown in the table below.

- **Chronoscope or Reaction Time**

Purpose: In order to determine the subjects' reaction times.

Tools required: Chronoscope

Method: the amount of time it takes for a response to begin after the stimulus has been presented. The simplest case is when there is just one possible reaction to a given stimulus; this is called the simple reaction-time. The choice of complex reaction - time arises when one is faced with the need to generate a certain response in response to a predetermined set of stimuli or sequence of stimuli. The subject's age and mental state also have a direct correlation with their reaction time. RTM-606 makes use of three distinct visual and auditory cues.

Scoring: The subjects' reaction times were measured to the closest one hundredth of a second.

Software Used

The data will be statistically analyzed using SPSS (Statistical Product and Service Solutions). Standard deviation & mean will be used to explain all data on selected anthropometric measurements, fitness levels, and physiological characteristics. Volleyball players' anthropometric measures, fitness levels, and other physiological characteristics will be evaluate further utilizing the independent sample t-test.

RESULTS AND DISCUSSION

The results presented in this study following anthropometric measures were taken: body weight, standing height, arm length, leg length Significant motor fitness predictors were also included.

Motor fitness attributes- Reaction Time, Co-ordination, Balance, Power, Agility & Speed. Each player's potential was assessed by three expert volleyball coaches, and the results are shown in the key performance indicators.

Twenty-five volleyball players were randomly selected to participate in the survey. From Manoharbhai Patel Institute of Engineering and Technology (MIET) in Gondia, Maharashtra. The chosen volleyball players are between the ages of 18 and 25. The subjects were chosen based on their

prior experience playing volleyball, which was at least two years, and whether or not they had represented their zonal teams. This study, which included 25 male participants from the All-India Inter-University & Inter-University level, contributes to the prediction of playing capability in volleyball games. The following anthropometric measures were taken: Weight, Length of hand, leg, arm, and height. Motor fitness attributes-Reaction Time, Co-ordination, Balance, Power, Agility & Speed. Each player's potential was assessed by three expert volleyball coaches, and the results are shown in the key performance indicators. Following the procedures outlined in the parts that follow, the data was analysed statistically. The disparities in anthropometric measurements, physiological factors, & physical fitness among volleyball players could be determined using Pearson's product-moment correlation coefficients.

ANALYSIS OF DATA

The following tables display the descriptive statistics on various motor fitness qualities and anthropometric variables of the subjects.

Table 1: Inter-university volleyball players' motor fitness and anthropometrical variables

S. no.	Variables	Minimum	Maximum	Mean	SD(+)
1	Body Weight	58.46	78.76	70.07	8.48
2	Height	160.63	182.98	180.91	6.42
3	Arm Length	70.32	86.87	81.28	4.91
4	Leg Length	89.95	118.86	100.12	5.39
5	Speed	7.49	8.08	7.87	0.78
6	Agility	10.81	11.97	19.38	1.52
7	Leg Explosive Power	1.72	1.96	1.87	0.08
8	Balance	7.08	10.89	17.47	8.63
9	Co-ordination	25.97	33.96	18.69	1.67
10	Reaction Time	0.25	0.42	0.117	0.014

CONCLUSION

Volleyball is a wonderful workout and one of the most popular sports worldwide for men and women of all ages. A quick pace with minimal physical contact is required for this game. the researcher aimed to shed light on the approach and methodology used to forecast the impact of anthropometric attributes or motor fitness variables on assessing the playing ability of volleyball players. Anthropometric variables (height, weight, leg & arm lengths), psychological variables (confidence level, reaction time, breath holding time, etc.), or physical variables (speed, agility, & explosive power) are all thoroughly evaluated in the research. There is no way for a volleyball player to execute to his or her full potential without first developing optimal anthropometric traits, which are a major prerequisite for reaching peak performance in the sport. The players' motor skill is a reflection of their overall athletic potential. Volleyball is a team sport where players compete by keeping the ball in the air. A player's height is the single most important stat for this type of sport. At the national & international levels of volleyball, the most important factors in a team's success are the members' technical knowledge, tactical prowess, anthropometric features, & physical performance. In terms of ideal body type, volleyball performance is superior. A volleyball team can only win games with impressive performances if each member possesses all of the required anthropometric qualities.

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Corresponding Author

Badole Rajendra Haridas*

PhD Student,Kalinga University, Raipur (CG)