



E-ISSN: 2707-7020
P-ISSN: 2707-7012
JSSN 2022; 3(1): 58-61
Received: 01-01-2022
Accepted: 05-02-2022

Dr. Amol O Deshmukh
I/c Principal, Lokhit College of
Physical Education
Yavatmal, Maharashtra, India

Analytical study of physical fitness components of handball and volleyball players

Dr. Amol O Deshmukh

Abstract

Physical Fitness is the ability to carry out daily tasks with vigour and alertness without fatigue and with ample energy to engage in leisure pursuits and to meet emergency situations. Physically fit persons recover faster than secondary persons. Physical fitness is essential for better performance in games and sports. Physical fitness is the base for excellence in performance. The present study was on two groups (60 Handball and 60 Volleyball) players. NPED physical fitness test was used to collect the physical fitness data Mean, Standard deviation 't' value was worked out for both the group. On the basis of the findings of the study it was found that the explosive power of leg, speed, arm explosive power, muscular endurance and cardiovascular respiratory endurance dominate in case of Handball players.

Keywords: Physical fitness, handball, volleyball, NPED physical fitness test

Introduction

Physical fitness refers to maximum functional capacity of all system of the body. We are exercising when ever we move and keeping our body tuned and in a good running order. The body of human is framed in such a way that it can jump, climb, bend, stretch and do more tedious work. The human body becomes more stronger as it exerts more and muscles involvement matters a lot in shaping it. Exercise helps in improving our health and builds up our energy and stamina.

Physical fitness is a state of health and well- being and, more especially, the ability to carry out daily task with vigor and alertness, and to meet unforeseen emergencies without undue fatigue. Fitness can also be defined as any form of physical movement that utilizes multiple muscle groups in the body.

Fitness is the condition of being physically fit and healthy and involves attributes that include, but are not limited to mental acuity, cardiorespiratory endurance, muscular strength, muscular endurance, body composition, and flexibility. While there is a standard definition for fitness, each individual can have their own personal understanding of what fitness means. To some individuals, being fit means the ability to complete a marathon or lift a lot of weight. To another, it could mean walking around the block without becoming short of breath. Your definition of fitness will be influenced by your interests, physical abilities, and goals. No matter what the definition, it is important for every individual to keep their personal definition of fitness within a healthy framework. This means you should have realistic expectations and maintain balance and moderation in all aspects of life. Set small, attainable goals and avoid giving too much power to the numerical measurements of fitness. This can help your journey to fitness seem much less daunting and much more enjoyable

Physical fitness is generally achieved through proper nutrition, sufficient rest and moderate-vigorous physical exercise. Physical fitness is one of the most important keys to a healthy body. It is the reason, a state of general well-being marked by physical health and mental stability. A person who is fit is capable of living life to its fullest extent. People who are physically fit are less prone to medical conditions and are more able to function at the peak of intellectual capacity.

There are different views regarding physical fitness. Modern definition of fitness says either a person or machine's ability to perform a specific function or a holistic definition of human adaptability to cope with various situations. To the ancient Greeks, being physically fit was of primary importance, equal to intellectual fitness.

Physical fitness is used in the context of two meanings: General fitness (a state of health and wellbeing) and specific fitness (the ability to perform specific sports or occupational skills). Fitness can be further subdivided into five categories: Cardiovascular endurance, muscular

Corresponding Author:
Dr. Amol O Deshmukh
I/c Principal, Lokhit College of
Physical Education
Yavatmal, Maharashtra, India

strength, muscular endurance, flexibility, and body composition. The criteria for physical fitness has also expanded to include the capacity to meet physical demands in an emergency situation.

Physical fitness is the capacity of the heart, blood vessels, lungs, and muscles to function at optimum efficiency. In previous years, fitness was defined as the capacity to carry out the day's activities without undue fatigue. However, with increased leisure time, and changes in lifestyles wrought by the industrial revolution, which took a large proportion of the population away from farm life and into more urban areas, this definition is no longer considered comprehensive enough.

Physical fitness is important for everyone to stay active throughout their lives. A healthy body houses a healthy mind. One of the true benefits and answers to the question why is physical fitness important is due to the effects it has on your inner-self. Regular physical activity has always been credited with increasing physical fitness. But it is said that what affects our physical selves affects our psychological and emotional selves as well, and that physical activity enhances both mental and physical fitness.

Physical fitness is one's richest possession; it can not be purchased and has to be earned through a daily routine of physical exercise. People, who possess optimal physical fitness, tend to look better, feel better and experience good health; all of which contributes to the quality of life. Physical fitness is necessary for success in most of the games and sports. Without a high level of physical fitness, an individual will not be able to withstand the stress and strain caused on the body by various games and sports. Physical fitness, in addition to bringing about performance in games and sports also helps in prevention of injuries in the long run and is an inseparable part of sports performance and achievement. The quality of an individual sportsman's fitness in terms of its utilitarian value is directly proportional to the level of performance. That means greater the level of fitness, the greater is the ability of a person to attain higher level of performance.

Physical fitness has been defined in various ways. Some define it as an absence of disease, and some rate this according to the amount of musculature developed, and few define physical fitness as the ability to perform certain sports skills. The American College of Sports Medicine (1990) has defined that, "fitness is the ability to perform moderate to vigorous levels of physical activity without undue fatigue and the capability of maintaining such ability throughout life".

Techniques of Physical Fitness

A human body is an ingenious creation and it is our duty to keep it healthy, for its potential to achieve is huge. For everything that humans have created, invented and discovered, his initial investment has been his brain, his blood, his body, and his mind. In a previous article, we observed how the body complements our thinking capacities, our emotional faculties and so on. Yet, more than 8 million people suffer only from heart attacks annually.

Degrading health, increasing pollution, exponential work pressure and deteriorating work culture add to our woes every day. We lead our lives like machines, moving to and fro between the office and home. We rarely smile and laugh, and instead of planning our next travel destination, we plan on meeting deadlines! Amidst all of this what lacks is our

will to take care of our own selves, love ourselves (body and mind alike) and consciously trying to better their conditions. Shout out to this: Improve your Physical Fitness! All we need to do is find half an hour from our busy schedules and give it to the betterment of our body and mind. A peaceful mind is a key to success and a healthy body is a key to a peaceful mind. Pediatricians claim that depression affects those more who fail to take proper care of their bodies.

According to current thinking in the physical education profession, physical fitness is either health related or performance related. Health-related physical fitness is concerned with the development of those qualities that offer protection against disease and are frequently associated with physical activity. For example, certain physiological and psychological factors often affected by physical activity are thought to cause some degenerative diseases. Thus, health related physical fitness is important to everyone and should be stressed upon by physical educator. Performance – related physical fitness is associated with those qualities conducive to better performance in sports and other physical activities, such as those requiring strength, endurance, agility and speed.

The components of both health-related and performance-related physical fitness are similar. For example, cardiovascular function, body composition, strength and flexibility. However, the degree of development of each varies with the two type of physical fitness. Compared to health-related fitness, a more extensive development of these components may be required to achieve an appropriate level of performance-related fitness. Performance-related fitness is often associated with sport. For example. Athletes may need to develop the fitness component of strength to a greater degree than average citizens interested in improving and maintaining their health. Physical fitness is to the human body what fine-tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us look, feel and do our best. More specifically, it is "the ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergency demands. It is ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is major basis for good health and well-being". "Physical fitness is the ability to carry out daily tasks with vigour and alertness, without undue fatigue and with ample energy to engage in leisure pursuits and to meet emergency situation".

Current Trends in Fitness

During the year 2020-2021, the Corona pandemic has shaken up the fitness industry. Instead of the motto "higher, faster, further", the future will see more health orientation, holistic offers and specialization in particular clientele such as risk groups. We present the seven most important fitness trends during 2020-2021 lockdown situations.

Any other year, the onset of January would have witnessed a horde of conscientious resolution-makers hitting the gym floors to make good on their well-intentioned fitness goals. However, with the world grappling with newer mutations of the ongoing health crisis, consumer confidence in physical fitness spaces appears to have plateaued—only 31 per cent of gym-goers have chosen to continue their memberships post lockdown, according to global studies. While the queue at the gym shower may look a lot different this year, we've

never been more acutely conscious of our fitness levels, believe the top trainers in the business. If you are wondering what the year ahead will look like, here are all the ways that the world of fitness has transformed, evolved and adapted to fit the new normal in 2021.

Virtual Coaching

With gyms and fitness centres shuttered, fitness enthusiasts continued to find newer ways to get a sweat sesh in—this included making the transition to a virtual medium of coaching. There were challenges on both sides, believes Sohrab Khushrushahi, founder of Sohfit and go-to trainer for many celebrities and others. He says, “When the lockdown first started, people were initially hesitant about virtual coaching, and justifiably so. When you are carrying something heavy, you always prefer to have someone around monitoring your movement and watching your form.”

However, as the lockdown went on, both sides worked on adapting to the new medium and he predicts that its popularity will continue to soar in the new year. “Virtual coaching has helped people train beyond barriers and geographical boundaries, and this has helped the trainer as much as the ones being trained. I always believe that you get your energy from the people you are training with and that is what gives any workout a different touch altogether,” he explains.

Shwetambari Shetty, fitness expert at Cure.fit, adds that the practical benefits of virtual training sessions can be overlooked either. “Beyond just being easy and convenient with a lesser commute, virtual sessions are also less intimidating which makes the barrier for entry lower for beginners. On the other side of the table, this also works well for trainers as they can coach without a physical space,” she says.

Home Gyms

Celebrity fitness trainer Namrata Purohit believes that the corresponding increase in home gyms isn't unexpected either. Having trained the best in the biz, from many senior celebrities to young and upcoming celebrities of tinsel town. She has now observed that everyday enthusiasts are investing in their fitness as well from within the comfort of their homes. She says, “Over the course of the lockdown, people started collecting simple pieces of equipment that they can use at home, such as dumbbells, resistance bands and foam rollers. For people who don't have access to a gym or want to fit in a quick workout and skip the commute, home gyms will be a great option in 2021.”

Shetty seconds the notion, and adds that the pandemic has played a significant role in providing impetus to home gyms. “In the pre-pandemic world, home equipment was an unheard-of occurrence. Only the very motivated would invest in equipment to be kept at home for a quick workout on busy days. However, we are now seeing people investing in equipment that is being recommended by their trainers, including kettlebells and shorter barbells with plates, and this will only continue to rise this year,” she explains.

Outdoor Workouts

While footfall is still trickling back in gyms, all trainers are in unanimous agreement that outdoor workouts will witness a spike in demand as a safer alternative to closed, cramped spaces. Khushrushahi says, “People have grown tired of

working out by themselves indoors during the lockdown of the past year, and they are now taking to open spaces that allow the mandatory six-foot distance and can serve as the canvas for a wide array of workouts, such as functional movement, lunges and even cycling.” While outdoor workouts are nothing new, Purohit adds that the switch could make for a welcome change. “This will serve as a golden chance for people to enjoy the weather outdoors and experience something new. If you're tired of running on the treadmill, opt for a brisk jog around the park instead. A fresh breath of air is always necessary, along with the freedom to try something new which you may not be able to do indoors.”

Mindful Exercising

In the wake of an unprecedented year, Shetty also believes that people will now be turning to exercises that can boost the mind-body connection. “This pandemic has also left us with a greater focus on mental fitness. As work-from-home continues and the future continues to look uncertain, there will be increased demand for mindful exercises, such as meditation and yoga. The mood-enhancing properties of dance fitness will also make it the go-to stress buster during this period of uncertainty,” she says.

Productive Workouts

The events of the past year have conspired to leave us with a greater appreciation for fitness, and Khushrushahi believes that the results are already visible as people look to more productive, results-driven workouts. “Despite being faced with a never-seen-before lockdown, people have become more conscious about their health than ever before. I've observed this change now in the fact that people are valuing their time more. Earlier, gyms were something of a social ground with a lot of socialising taking place in between sessions. I have now noticed that people are valuing their time more and are devoting every single minute spent to getting the most out of their workout and making their time there as productive as they can,” he says.

Ultimately, it was the prospect of a nationwide lockdown that enabled people to value the importance of fitness, believes the Mumbai-based celebrity trainer. “It was when we were confined within the four walls of our home that we truly appreciated the value of movement and its benefits. I feel that we'll come out of this with an increased focus on fitness, with more people resolving to keep their momentum going, such as taking up a sport, once things open up,” he concludes.

Methodology

For the purpose of the study 120 male players (60 Handball and 60 Volleyball) were randomly selected as the subject for the study. In order to measure variables such as speed, explosive power of leg extensor muscles, arm/shoulder muscular endurance, NPED test were used. NPED Test items and their purpose given below:

NPED Test items and their purpose given below

Sl. No.	Items	Purpose of Test
1.	100 Meters	Basic Speed
2.	Long Jump	Explosive Power of leg
3.	Shot Put	Arm/Shoulder muscular endurance
4.	High Jump	Leg explosive power
5.	800 Meters	Circulatory, respiratory endurance

Result and Discussions of the Findings

Mean of 100 mtr. Run, Long Jump, Shot put, High Jump and 800 mtr. Run of Handball and Volleyball players given below:

Run of Handball and Volleyball players

Sl. No.	Test Items	Handball Players	Handball Players	Mean	Standard
		Mean	Mean	Difference	Error
1.	100 Meters	12.46	13.10	0.64	0.733
2.	Long Jump	5.53	4.46	0.57	0.407
3.	Shot Put	9.60	9.33	0.27	1.074
4.	High Jump	1.52	1.40	0.12	0.698
5.	800 Meters	2.43	3.02	0.19	0.469

Result

Test Items

100 m. Run: Handball players showed better than Volleyball players. There was significant difference between the speed of Handball players. Volleyball players showed better speed and were found statistically superior.

Long Jump: Handball players were better than Volleyball players. There was significant difference between the leg power of Handball and Volleyball players. Handball players showed better leg power.

Shot put: Handball players showed better arm/shoulder explosive power than Volleyball players. There was no significant difference between arm/shoulders muscular power of Handball and Volleyball players.

High Jump: Volleyball players showed greater explosive leg power. There was significant difference between the explosive power leg of Handball and Volleyball players for jumping to a height.

800 m. Run: Players showed better cardio-vascular respiratory endurance. There was no significant difference between endurance of Handball and Volleyball Players.

Conclusions

On the basis of the findings of the study it was found that the explosive power of leg, speed, arms explosive power, muscular endurance and cardiovascular respiratory endurance dominate in case of Handball players.

References

1. Rout, Tanuja. Test and Measurement in Physical Education, Angel Publication, New Delhi.
2. Banerjee, Amit. Measurement and Evaluation in Physical Education, Angel Publication, New Delhi.
3. Clark David H, Clark Harrison II. Research Process in Physical Education, Second Edition Prentice Hall: INC. Englewood Cliffs, New Jersey 07632, 1984.
4. Prentice Hall. INC., Englewood Cliffs, New Jersey 07632, 1984.
5. Bucher CA, Wuest DA. Foundation of Physical Education and Sport, Tenth Edition Times Mirro/Mosby College Publishing St. Louis; c1987.
6. Kansal, Dr. Devendra Kumar. Test and Measurement in Physical Education, New Delhi D.V.S. Publication; c1996.

7. Donald H, Me Burney. Research Methods, 3rd Edition. Book/Cola Company Pacific Grove California, Haenry Bosley woolf Webster's New Collegiate Dictionary U.S.A; c1994.
8. Banerjee, Rajat Kumar. Test and Measurement in Physical Education, Sports Vision, New Delhi.