



## International Journal of Advance Studies and Growth Evaluation

# Effect of Physical Activities and Hand Ball Workouts on Selected Health Related Fitness Variables among University Level Handball Players in Kashmir

\*<sup>1</sup> Dr. Pratheepa CS

\*<sup>1</sup> Assistant Professor, Department of Physical Education, Central university of Kashmir, Ganderbal, Kashmir, Jammu and Kashmir, India.

### Article Info.

E-ISSN: 2583-6528

Impact Factor (SJIF): 6.876

Peer Reviewed Journal

Available online:

[www.alladvancejournal.com](http://www.alladvancejournal.com)

Received: 04/Feb/2025

Accepted: 05/March/2025

### \*Corresponding Author

Dr. Pratheepa CS

Assistant Professor, Department of  
Physical Education, Central University of  
Kashmir, Ganderbal, Kashmir, Jammu  
and Kashmir, India.

### Abstract

The resolve of the current training was to discover the effect of Physical activities and hand ball workouts on selected health related fitness variables among university level hand ball players in Kashmir. To achieve the purpose of the study, 105 subjects will be selected at random from university level at Kashmir, J&K. India. The age of the volunteer will be ranged between 20 to 30years. The selected subjects will be randomly divided into three groups namely Physical activity group, hand ball workout group and control group with Thirty-five subjects (n=2) in each group. Experimental one, two groups will undergo general physical activity, handball workouts respectively and the control group will not have any activities apart from their regular curricular activity. The analysis of covariance (ANCOVA) will be used to find out the weighty difference. If the found 'f' ratio is weighty, Scheff's test will be applied as a post hoc to fix the paired means difference. The outcomes of the study showed that there was a large improvement on selected health related fitness variables.

**Keywords:** Physical activity, hand ball workouts, rotate jumps, D shooting, change the directions in running, technical actions and movements.

### Introduction

#### Physical Activity

Lord Krishna emphatically calls for maintenance of physical health through activity and exercise. He clearly states that one cannot even maintain his body without physical exercise. This is an apt reminder for people to remain physically active so as to prevent disease as well as for persons with disease/other lifestyle disorder patients to view exercise as an important part of disease management. "Desisting from action, you cannot even maintain your body" Niyatam kuru karmatvam, karmajayo hrukarmanaha 3:8 Sports activities in universities concern the involvement of students in fitness activities, Specific sports training, health nutrition and drug education, gymnastics, yoga, swimming, and some parts of dance. All are intended to encourage a healthier more enjoyable lifestyle. Physical fitness denotes to the genetic capacity of the specific workout gives best result to the everyday jobs of the daily active lacking undue feebleness and tranquil have a standby of strength and energy obtainable to happen sensible rapid standby to be found upon them. Physical fitness brings capacity bound for activity.

State-of-the-art Excellency in performance requires simple training every day-throughout the year to sustain fitness for performance at ultimate level. Modified present hand ball is a fast game. Patented unbelievable hand ball game player's performances by same one non other beat them. In fact, modern hand ball players are able to perform many advanced moves, rotate jumps, D shooting, change the directions in running, technical actions and movements in very short period and within order simulate strong mind help to handle the strategic situation.

#### Need of Health Fitness on Sports

Physical fitness refers to the genetic capacity of the individual to perform the tasks of the daily living without unwarranted drowsiness and fatigue and still have a reserve of strength and energy available to meet satisfactorily sudden emergency placed upon him. Physical fitness provides capacity for activity. The techniques and skills in sports and games have advanced dramatically which demands the competitive sport participant to possess a high degree of physical fitness in hand ball and hand ball require physical fitness to enhance the performance.

## Statement of the Problem

The purpose of the study is to find out the effect of sports activities and hand ball workouts on selected health related fitness (cardio respiratory endurance and strength) among university level hand ball players.

## Hypotheses

It was hypothesized in the following manner.

1. There would be a huge deference among experimental groups and control group on selected criterion variables due to Physical activity and hand ball workouts.
2. There would be a huge difference between experimental groups on selected criterion variables.
3. There would be a huge improvement on selected criterion variables due to Physical activity programmed and hand ball workout.

## Methodology

### Selection of Subjects

To achieve the purpose of the study, 105 subjects will be selected at randomly from Central University of Kashmir, Ganderbal, Jammu & Kashmir, India. The age of the volunteers will be ranged between 20 to 30 years. The selected subjects will be randomly divided into three groups namely sports activities group, hand ball workout group and control group with Thirty-five subjects (n=35) in each group. Experimental groups will undergo physical training and the control group will not have any training program me apart from their regular curricular activity.

### Selection of Variables

The following Physical activity and hand ball workouts will be selected as a specific Dependent variable namely

### Physical Activity Such us (1 Hour)

1. General exercises.
2. Light apparatus exercise. (Dumbbells, warns, lazime and hoops)
3. Teaching handball.
4. Handball game practice.
5. Minor games (Relay games, Ball relay games, aerobic dance and tag games)
6. Com. Visual program.

### Hand Ball Workouts Such as (1 Hour)

1. Specific exercise warm-up with hand ball
2. Hand ball exercise
  - i) Low& High Dribbling.
  - ii) Passes: Chest, bounce, Hook, Wrist, Side, 2 & 3man passes.
  - iii) Run jump and shoot.
3. Teaching Hand ball.
4. Hand ball Game practice with zone or man to man
5. Hand ball minor game/relay/Wall practice.

### Training Programme

During the training period, the experimental group underwent their respective training plan three days per week on alternate days for twelve weeks. The training session includes, warming up and warm down period.

Every session, the workout lasted for 45 to 60 minutes approximately. The training programs carried out in the playground and athletic track. The subjects underwent their respective training programs as per the schedules under the supervision of the investigator.

Each training session was conducted only in the evening time 5.00 to 6.00 pm. During experimental period control group did not participate in any of the special training.

## Selection of Dependent Variables

### Health Related Physical Fitness Components

- Cardio respiratory endurance
- Strength

## Selection of Tests

**Table 1:** Health Related Fitness Variables

Criterion variables	Test items	Unit of Measurement
Cardio respiratory endurance	Cooper 10 min run and walk test	In Seconds
Strength	Pushups	Counting

**Table 2:** The Scheff's Post HOC Test for the Difference between Paired Means on Cardio Respiratory Endurance and Strength

No of groups	No of Sample in Group1	No of Sample in Group2	Table f Value @.05	MS Within	CI Value
3	121	116	3-02	29.64	1.74

\*Weighty at .05 level of confidence.

## Result of the Study on Cardio Respiratory Endurance and Strength

The result of the study showed that there was huge difference among the adjusted post- test means of Physical activity group, hand ball workout group and control group on cardio respiratory endurance and strength hence, it was concluded that physical activity and hand ball workout improve cardio respiratory endurance and strength gradually.

## Statistical Technique

The analysis of covariance (ANCOVA) will be used to find out the huge difference. If the found 'f' ratio is heavy, Schaffer's test will be applied as a Post hoc to determine the paired means difference. In all the case level of confidence will be fixed at .05 to test the significance.

## Discussion on Findings

There was a heavy improvement on selected criterion variables such as cardio respiratory endurance and strength, due to physical activity and hand ball workout among them. The hand ball workout group dominated in the improvement on selected criterion variables. The results of the study showed that there was a heavy difference between experimental groups on selected criterion variables such as cardio respiratory endurance and strength due to physical activity and hand ball workout. Hence, the researcher's second hypothesis was accepted.

## Conclusions

It was concluded that physical activity group and hand ball workout group weightily improved cardio respiratory endurance and strength of the university students and comparing between the experimental groups, it was found that particularly hand ball skill and techniques developed with handball workout group was extremely better than physical activity group.

## References

1. Bayios IA, Anastasopoulou EM, Sioudris DS, Boudolos KD. Relationship between isokinetic strength of the internal and external shoulder rotators and ball velocity in team handball. *Journal of Sports Medicine and Physical Fitness*. 2001; 41:229-235. [PubMed] [Google Scholar]
2. Buchheit M. The 30-15 intermittent fitness test: Accuracy for individualizing interval training of young intermittent sport players. *Journal of Strength and Conditioning Research*. 2008; 22:365-374. [DOI] [PubMed] [Google Scholar]
3. Buchheit M. Should We be Recommending Repeated Sprints to Improve Repeated-Sprint Performance? *Sports Medicine*. 2012; 42:169-172. [DOI] [PubMed] [Google Scholar]
4. "IHF | the International Handball Federation – Timeline of Milestones"
5. Carron AV, Eys M. Group dynamics in sport. 4th edition Morgantown: Fitness Information Technology, 2012. [Google Scholar]
6. Chelly MS, Hermassi S, Shephard RJ. Relationships between power and strength of the upper and lower limb muscles and throwing velocity in male handball players. *Journal of Strength and Conditioning Research*. 2010; 24:1480-1487.
7. Gonzales SPI, Coronado OJF. Physiological variables related to motivation among young athletes of handball who practice competition sports: European Handball Federation Scientific Conference 2011 – Science and Analytical Expertise in Handball. Vienna: EHF, 2011b, 63-67.
8. Marques MAC, Gonzalez-Badillo JJ. In-season resistance training and detraining in professional team handball players. *Journal of Strength and Conditioning Research*, 2006; 20:563-571. [DOI] [PubMed] [Google Scholar]
9. Marques MC. In-season strength and power training for professional male team handball players. *Strength and Conditioning Journal*. 2010; 32:74-81. [DOI] [PubMed] [Google Scholar]