## 5.1 Summary

Volleyball programs can effectively make use of players' volleyball skills and physical fitness. This is why the researcher is interested in finding out how volleyball players' skill performance is related to various characteristics of physical fitness. The objective of the study is to find out the relationship of motor fitness components with skill performance of volleyball players. For the present study the selection of the sampling was based on Veer Narmad South Gujarat University, Surat Volleyball intercollege tournament. Here for this said tournament participating colleges were divided into four zones, Surat city, Surat Rural, Bharuch and Valsad district respectively. Out of these zones the four semi- finalists team of each zone means sixteen best teams, four from each zone having 192 male best players based on their performance, select total 180 subjects out of 192 for the present study. The subjects selected was in the age range of 17 -25 years.

The motor fitness components were speed, agility, flexibility, explosive power and Cardio – vascular endurance. The volleyball skill performance were measured with the AAHPER Volleyball Skill Test.

The analysis of the statistical parameters, such as descriptive statistics like mean, standard deviation, minimum value, maximum value, etc., was most relevant to the study's primary goals. Karl Pearson's product moment coefficient of correlation was used to evaluate the connection between volleyball players' skill performance and physical fitness components. Multiple regression analysis was used to predict the skill performance in volleyball from physical fitness components. A significance threshold of $p<0.05$ was used.

## 5.2 Result and Conclusions

**Relationship of AAHPER Volleyball Skill with motor fitness components of volleyball players.**

- The speed significantly positive. And agility and flexibility significantly negative correlation with the volleying ability.
- The negative but not statistically significant correlation between explosive power and cardio-vascular endurance and volleying ability.

- The explosive power significantly negative correlation with the service ability.
- The positive but not statistically significant correlation between speed, flexibility and agility. And the cardio-vascular endurance negative not statistically significant correlation with the service ability.
- The agility significantly positive correlation with the right side passing ability.
- The positive but not statistically significant correlation between speed, flexibility and cardio-vascular endurance**.** And explosive power negative but not statistically significant correlation between right side passing ability.
- The flexibility significantly positive correlation with the left side passing ability.
- The positive but not statistically significant correlation between speed and agility**.** And explosive power and cardio-vascular endurance negative but not statistically significant correlation between left sides passing ability.
- The flexibility significantly negative correlation with the right side set-up ability.
- The positive but not statistically significant correlation between agility, explosive power and cardio-vascular endurance**.** And speed negative but not statistically significant correlation between right side set-up ability.
- The positive but not statistically significant correlation between agility, cardio-vascular endurance. And speed**,** flexibility and explosive power negative but not statistically significant correlation between left side set-up ability.

**The combined contributions of selected Motor fitness elements on AAHPER volleyball skill performance are as follows:**

- The combined contribution of motor fitness components with volleying ability and right side set-up ability was found to be statistically significant. It can be inferred that volleying ability and right side set-up ability are improved if physical fitness components are taken together.
- There was no combined contribution with the motor fitness components of service ability, right and left passing ability as well as left side set-up abilities.

**Combination prediction equation based on motor fitness components for AAHPER volleyball skill performance:**

- A significant model for volleying ability was found; the agility, flexibility, and speed model explained 7.1% of the variability in volleying ability. The variation in volleying skill was explained by agility 2.7%, flexibility 2.7%, and speed 2.4%.
- A significant model for right side set-up ability was found; the flexibility and cardio-vascular endurance model explained 4.2% of the variability in right side set-up ability. The variation in right side set-up ability was explained by flexibility 2.6%, and cardio-vascular endurance 2.4%.

## 5.3 Recommendation

- It is recommended that volleyball players be chosen by coaches and trainers using the anthropometric, motor fitness, motor skill, and competitive experience variables equation listed in the results.
- Based on findings, coaches and trainers can create scientifically-based training programs that prioritize improving motor fitness and motor skill factors that have been identified as performance predictor to the current study's volleyball players' performance.
- Similar studies can be conducted by choosing alternative age groups, sexes, and performance levels.
- The same study can be performed with additional physical fitness components that were not included in the current study.
- Similar study may also be conducted for other sports/ discipline