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A Comparision Of Motor Fitness Variables Between Winner And Loser Volleyball Players

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ABSRACT

The purpose of the present study was to find out the comparison between selected Motor Fitness Variables between winner and loser Volleyball players. 96 University Volleyball players from different universities, age ranging from 17 to 25 years having minimum North Zone Inter University level participation or position holders in Volleyball competitions have been selected. The random sampling technique has been used to collect the required data. The comparison between winner and loser Volleyball players on selected Motor Fitness variables were established, for each variable, After statistical analysis, the value of mean and standard deviation of the Motor Fitness variables were computed and 't' test was applied to find out the significance of difference between the scores of winners and losers on Motor Fitness variables. The study was tested at .05 level of significance.

Finding: The study revealed that winner group among winner- looser category was better than other groups on Motor Fitness variables.

Keywords: Motor Fitness Variables, Winners, Losers**,** Volleyball, Players

INTRODUCTION

Scientific training and talent identification is a modern day trend of highly specialized performances in different sports. Games and Sports have assumed multi-dimensional importance and it is better understood today than ever before. Games and sports are an essential component of our society and are entering different aspects of the society. The philosophy of fitness emphasizes on preventive medicine and movement economy, improved specialization of sports and games through the application of scientific knowledge and broadening of latest training methods making them reach all segments of people.

Volleyball has come a long way from the muddy-old YMCA gymnasium of Holyoke, Massachusetts, USA, where William G. Morgan invented the sport back in 1895. It has seen the beginning of two centuries and the dawn of a new millennium.

Volleyball is now among the five biggest international sports, and the FIVB, with its 220 affiliated national federations, is one of the biggest international sporting federation in theworld.

The term "motor fitness" is mostly used interchangeably with physical fitness by the physical educators, but it is very essential for the physical education students to know the basic alteration between physical fitness and motor fitness. Physical fitness is used to symbolize only four basic fitness components (muscular strength, muscular endurance, cardiovascular endurance and flexibility), whereas motor fitness is a more comprehensive term which includes all the ten fitness components like four fitness, one of the health related fitness and five motor performance components, power, speed, agility, balance and reaction time, which is vital for the attainment of success in sports. In other words, motor fitness refers to the proficiency in basic movements and also to the addition of physical fitness.

The present study was attempted to provide guidelines about the relationship of selected Motor Fitness variables and Volleyball performance so that physical education teachers and coaches can be benefited to inform their trainees about the specific qualities that should possess for each Volleyball player.

OBJECTIVES OF THE STUDY

The present study has the following objectives.

1. To find out significant differences between total sample of winner and loser volleyball players on the Motor Fitness variable Speed.
2. To find out significant differences between total sample of winner and loser volleyball players on the Motor Fitness variable Explosive Shoulder Strength.
3. To find out significant differences between total sample of winner and loser volleyball players on the Motor Fitness variable Explosive Leg Strength.
4. To find out significant differences between total sample of winner and loser volleyball players on the Motor Fitness variable Agility.
5. To find out significant differences between total sample of winner and loser volleyball players on the Motor Fitness variable Reaction Time.
6. To find out significant differences between total sample of winner and loser volleyball players on the Motor Fitness variable Cardiovascular Endurance.

METHEDOLOGY

For the present study 96 University Volleyball players, age ranging from 17 to 25 years having minimum North Zone Inter University level participation or position holders in Volleyball competitions have been selected. The random sampling technique has been used to collect the required data. Various Motor Fitness

variables, i.e. Speed, Explosive Shoulder Strength, Explosive Leg Strength, Agility, Reaction Time and Cardiovascular Endurance were assessed. Top four teams in North Zone Volleyball tournament were considered as winner and four teams who lost in first round were declared as losers.

STATISTICAL ANALYSIS

The data obtained through test was compiled and tabulated. After the statistical analysis, the value of mean and standard deviation was computed and 't' test was applied to find out the significance of difference between the scores of winner-loser on Motor Fitness variables. The study was tested at .05 level of significance.

Table 1: Mean Speed (Seconds) of athletes according to their playing outcome

Playing outcome	N	Mean	Standard deviation	Mean difference	T	df	p- value
Winner	48	6.82	0.39	-0.327	-3.877	94	0.000^{S}
Loser	48	7.14	0.42				

S – Significant(p<0.05)

Table 1 represents the mean speed of athletes according to their playing outcome. Mean speed among winners was 6.82 seconds while among losers was 7.14 seconds. The p-value was significant (t- -3.887, p- 0.000(p<0.05)). Mean speed and deviation from mean is shown in Figure 1.

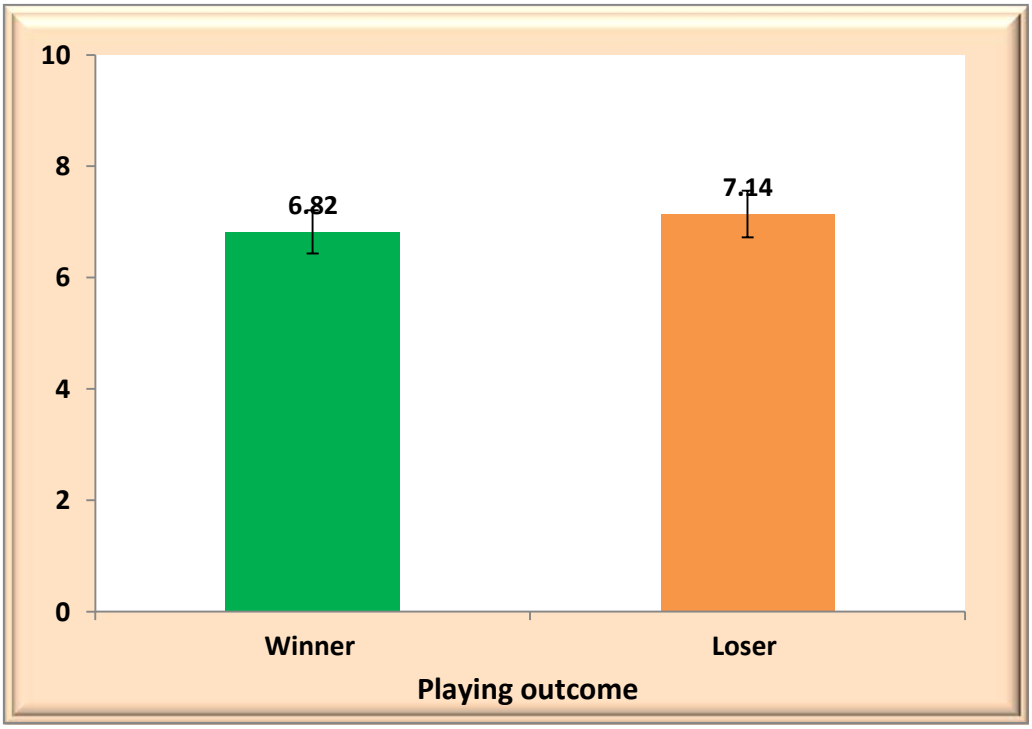

Figure 1: Mean comparison of Speed according to playing outcome

Table 2: Mean Explosive Shoulder Strength (Meter) of athletes according to their playing outcome

Playing outcome	N	Mean	Standard deviation	Mean difference	T	df	p-value
Winner	48	13.66	1.85	0.091	0.240	94	0.811^{NS}
Loser	48	13.57	1.88				

NS - Non Significant (p>0.05)

In Table 2, the mean distribution of Explosive shoulder strength according to playing outcome shows non-significant mean difference(0.091) between winner and Loser team athletes according to independent sample (t- 0.240, p-0.811(p>0.05)). The athletes (M-13.66) on the winning streak had higher mean explosive shoulder strength than Loser team athletes (M-13.57). The standard deviation was more in Loser team athletes (1.88). Mean comparison of explosive shoulder strength is visible in Figure 2.

Figure 2: Mean comparison of Explosive Shoulder strength according to playing outcome

Table 3: Mean Explosive Leg Strength (Meter) of athletes according to their playing outcome

Playing outcome	N	Mean	Standard deviation	Mean difference	T	df	p- value
Winner	48	2.52	0.35	0.125	1.687	94	0.095^{NS}
Loser	48	2.39	0.37				

NS - Non Significant(p>0.05)

Mean Comparison of athletes according to their playing outcome is shown in Table 3. The mean explosive leg strength of winner team athletes was 2.52 ± 0.35 and mean strength of loser team was 2.39 ± 0.37. The mean difference was 0.125. The mean strength of Loser was significantly (t- 1.687, p-0.095(p>0.05)) lower than winner. The mean and SD described above for winner and Loser athletes are shown in a graphical way in Figure 3.

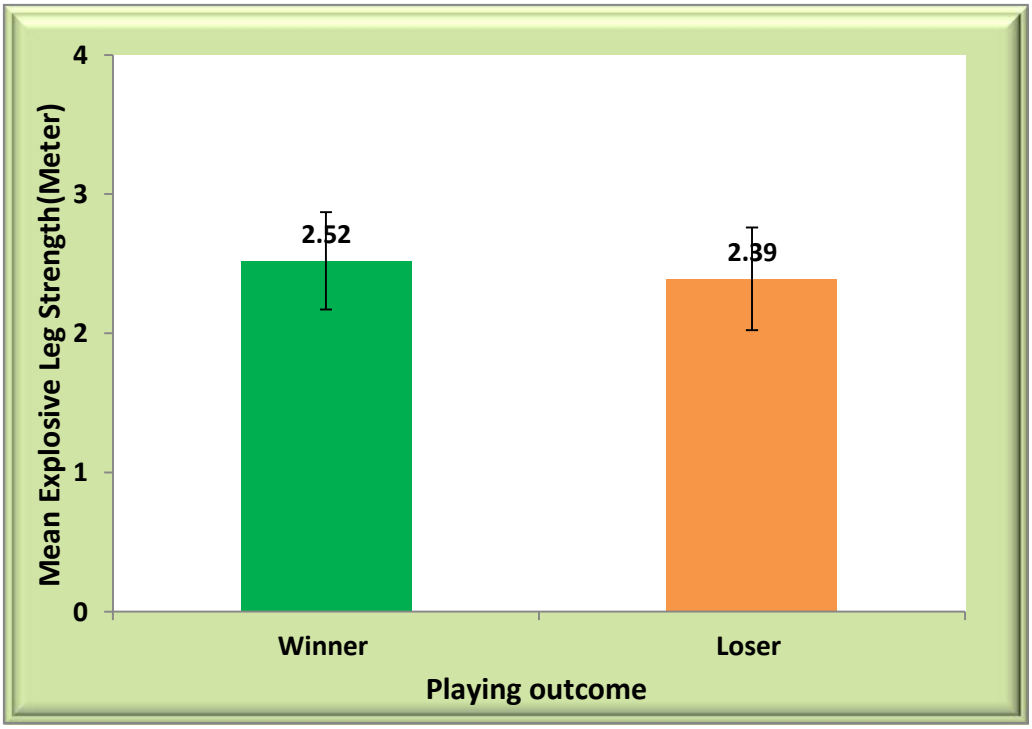

Figure 3: Mean comparison of Explosive Leg Strength according to playing outcome

Table 4: Mean Agility (Seconds) athletes according to their playing outcome

Playing outcome	N	Mean	Standard deviation	Mean difference	t	df	p- value
Winner	48	11.92	0.73	-0.854	-3.747	94	0.000[S]
Loser	48	12.78	1.39				

S – Significant (p<0.05)

Distribution of Agility among volleyball athletes according to playing outcome is shown in Table 4.36. The mean Agility of Loser (M-12.78) group was significantly (t - 3.747, p-0.000(p<0.05)) more than winner(M-11.92) athletes. The mean difference between both groups was -0.854. The Figure 4 below shows the mean distribution of Agility according to playing outcome.

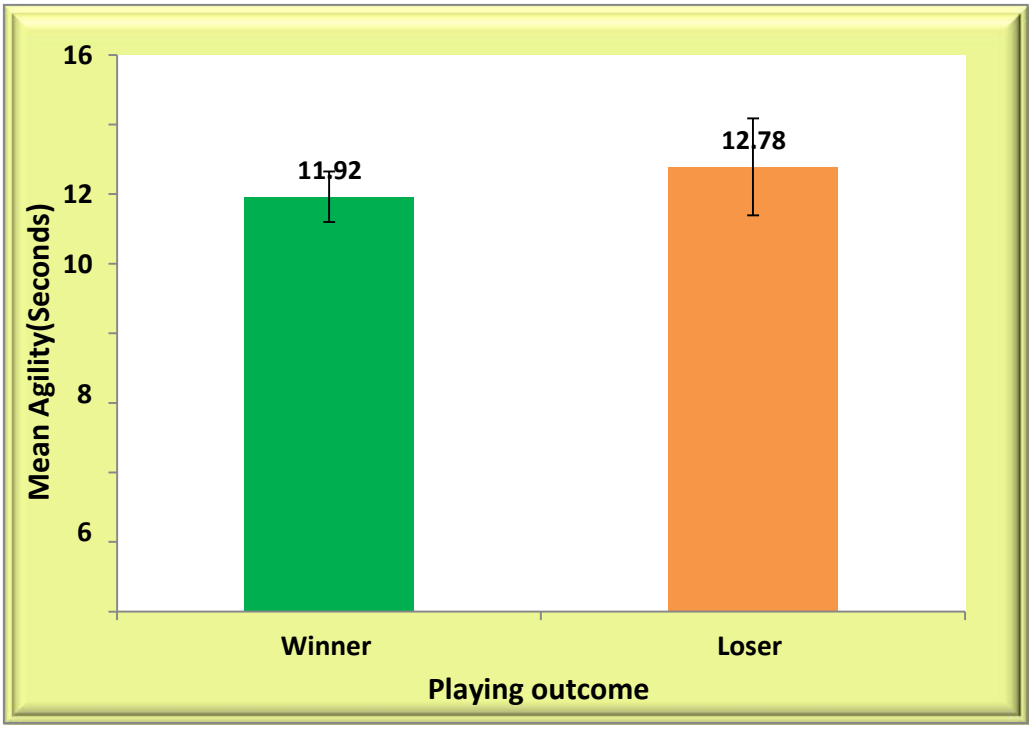

Figure 4: Mean comparison of Agility according to playing outcome

Table 5: Mean Reaction Time (Seconds) of athletes according to their playing outcome

Playing outcome	N	Mean	Standard deviation	Mean difference	t	Df	p-value
Winner	48	5.52	0.64	-0.785	- 4.551	94	0.000[S]
Loser	48	6.30	1.00				

S – Significant (p<0.05)

In Table 5, the mean distribution of reaction time according to playing outcome shows significant mean difference(-0.785) between winner and Loser team athletes according to independent sample (t -4.551, p-0.000(p<0.05)). The player (M-5.52) on the winning streak had lower mean reaction than Loser team athletes (M-6.30). The standard deviation was more in Loser team athletes (1.00). Figure 5 is the graphical presentation of mean reaction time among winner and loser athletes.

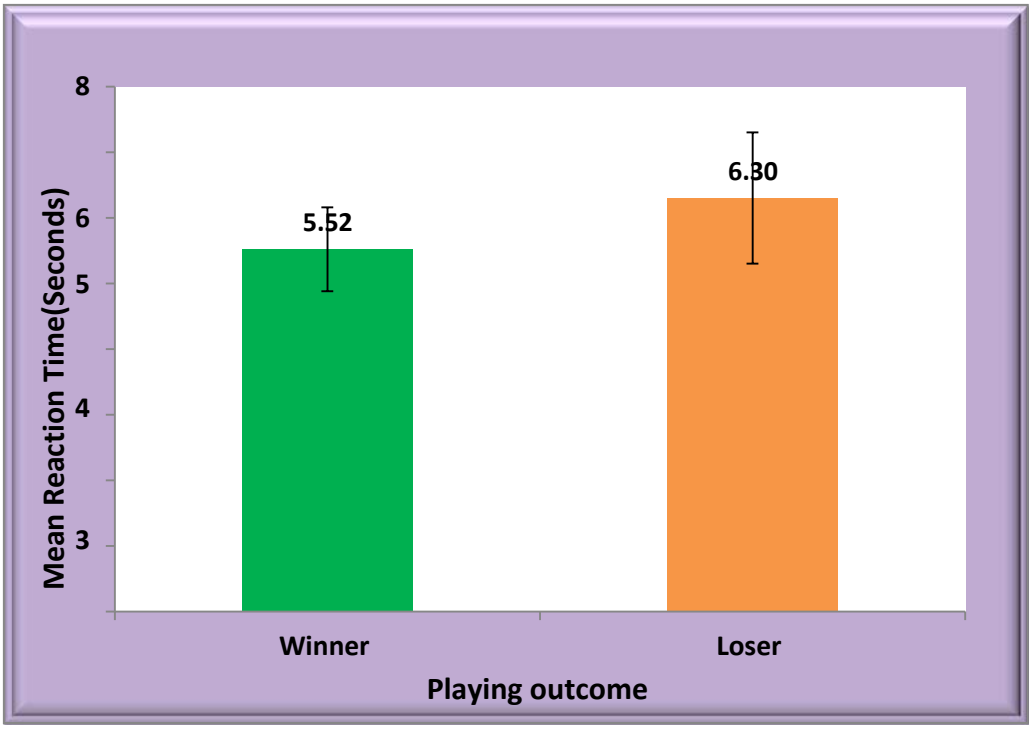

Figure 5: Mean comparison of Reaction Time according to playing outcome

Table 6: Mean Cardiovascular Endurance(Meter) among athletes according to their playing outcome

Playing outcome	N	Mean	Standard deviation	Mean difference	t	df	p-value
Winner	48	2225.83	238.87	107.396	2.324	94	0.022[S]
Loser	48	2118.44	213.20				

S – Significant (p<0.05)

Table 6 represents the mean cardiovascular endurance of athletes according to their playing outcome. Mean endurance among winners was 2225.83 meter while among losers was 2118.44 meter. The p-value was significant (t- 2.324, p-0.022(p<0.05)). Mean cardiovascular endurance and deviation from mean is shown in Figure 6.

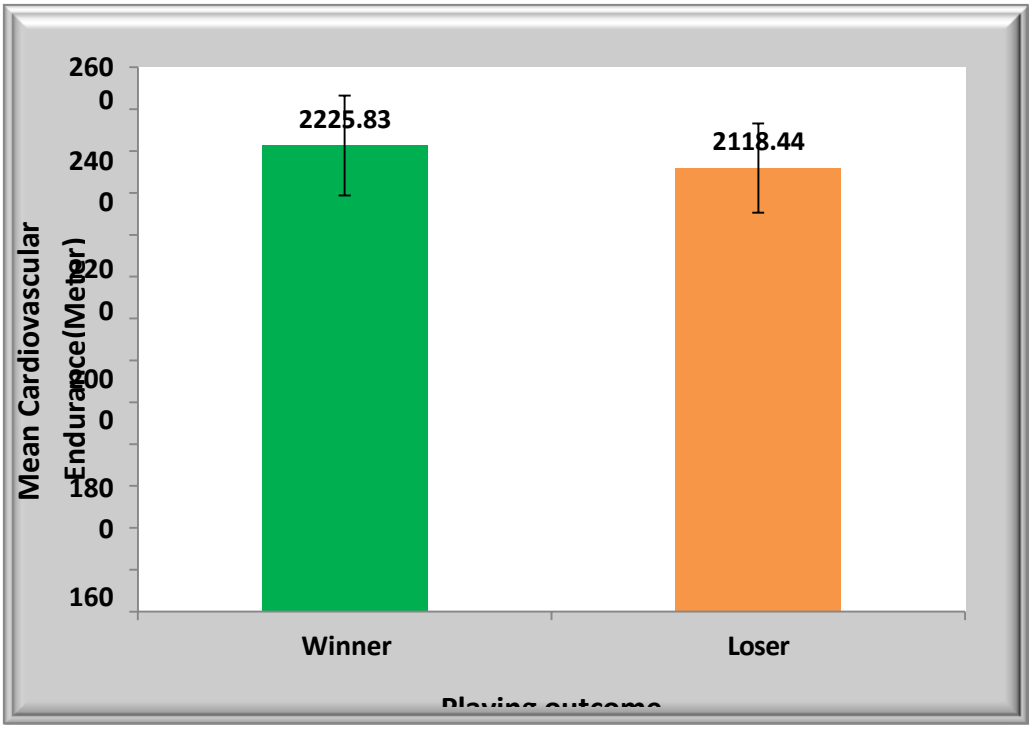

Figure 6: Mean comparison of Cardiovascular Endurance according to playing outcome

Conclusions of the Study

1. With significantly lesser time for 50m dash run the winner team possessed better speed than loser team.
2. Explosive shoulder strength of winner team was higher but not significant.
3. The winning team athletes showed better Explosive leg strength than loser team.
4. The average agility of winning team athletes was significantly higher than loser team.
5. Reaction time of winning team was significantly quicker than loser team.
6. Significantly higher cardiovascular endurance was visible in winner team than loser team.

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