

Chapter IV

ANALYSIS OF DATA AND RESULTS OF THE STUDY

The collected data pertaining to the study has been analyzed and presented in this chapter. The purpose of the study was to analyse the motor fitness and psychological among inter University women football players of different topography (south, north, east and west zone). To achieve the purpose of this study the investigator selected one hundred and sixty (160) inter university women football players, they had participated in the all India inter University women football tournament 2011-12, were selected for this study. Forty women players were selected from each zone. The age ranged from 18 to 28 years.

The data which was collected from the subjects were treated statistically. Descriptive statistics such as mean, standard deviation, range, minimum score and maximum score were found in order to get the basic idea of the data distribution. To compare the motor fitness and psychological variables among the 4 zone inter university women football players, the one way analysis of variance (ANOVA) was used. And the POST-HOC analysis (LSD) was applied when the F-ratio was found to be significant. The level of significance chosen was 0.05 throughout the study to determine the significant difference among groups.

4.1 Analysis of the data

The comparison of selected motor fitness and psychological variables among university women football players from four zones was determined by subjecting the collected data to the Analysis of variance separately and is presented below.

4.2 Selected Motor Fitness variables

4.2.1 Speed

The data collected on Speed of south, north, east and west zone of women football players have been statistically analyzed and presented in the following tables;

TABLE 4.1
DESCRIPTIVE SCORES ON SPEED SCORES AMONG GROUPS
(Scores in Seconds)

Zone	Mean	SD	Min	Max	Range
South	8.20	0.52	7.55	9.13	1.58
North	8.63	0.40	7.69	9.21	1.52
East	8.45	0.49	7.56	9.34	1.78
West	8.49	0.47	7.78	9.34	1.56

It is observed from table 4.1 that the mean value of south is 8.20, for north, it is 8.63 and for east, it is 8.45 and mean value of west is 8.49. The

standard deviation is 0.52, 0.40, 0.49 and 0.47 respectively for south, north, east and west. The range of south is 1.58, north is 1.52 and that of east and west is 1.78 and 1.56 respectively.

TABLE 4.2
ANOVA OF SPEED AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	3.85	3.00	1.28	5.78*
WITH IN	34.64	156.00	0.22	
TOTAL	38.49	159.00		

*Significant at .05 level for the degrees of freedom (3.156) 2.70

Table 4.2 shows the obtained ‘f’ ratio value 5.78 which was greater than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a significant difference on speed among south, north, east and west zone women football players.

TABLE 4.3
PAIR WISE COMPARISON OF MEAN SCORES OF
SPEED AMONG GROUPS
(Scores in Seconds)

SOUTH	NORTH	EAST	WEST	MD	CD
8.20	8.63			0.43*	0.21
8.20		8.45		0.25*	
8.20			8.49	0.29*	
	8.63	8.45		0.18	
	8.63		8.49	0.14	
		8.45	8.49	0.04	

*Significant at .05 level of confidence

From the table 4.3, it is clear that the mean difference value of 0.43, 0.25 and 0.29 when south zone women football players is compared with north, east and west zone players respectively, proved to significant since this value is higher than the critical difference of 0.21.

The result of the study showed that there was a significant difference between South and North, South and East, South and West, North and East, North and West, East and West on speed.

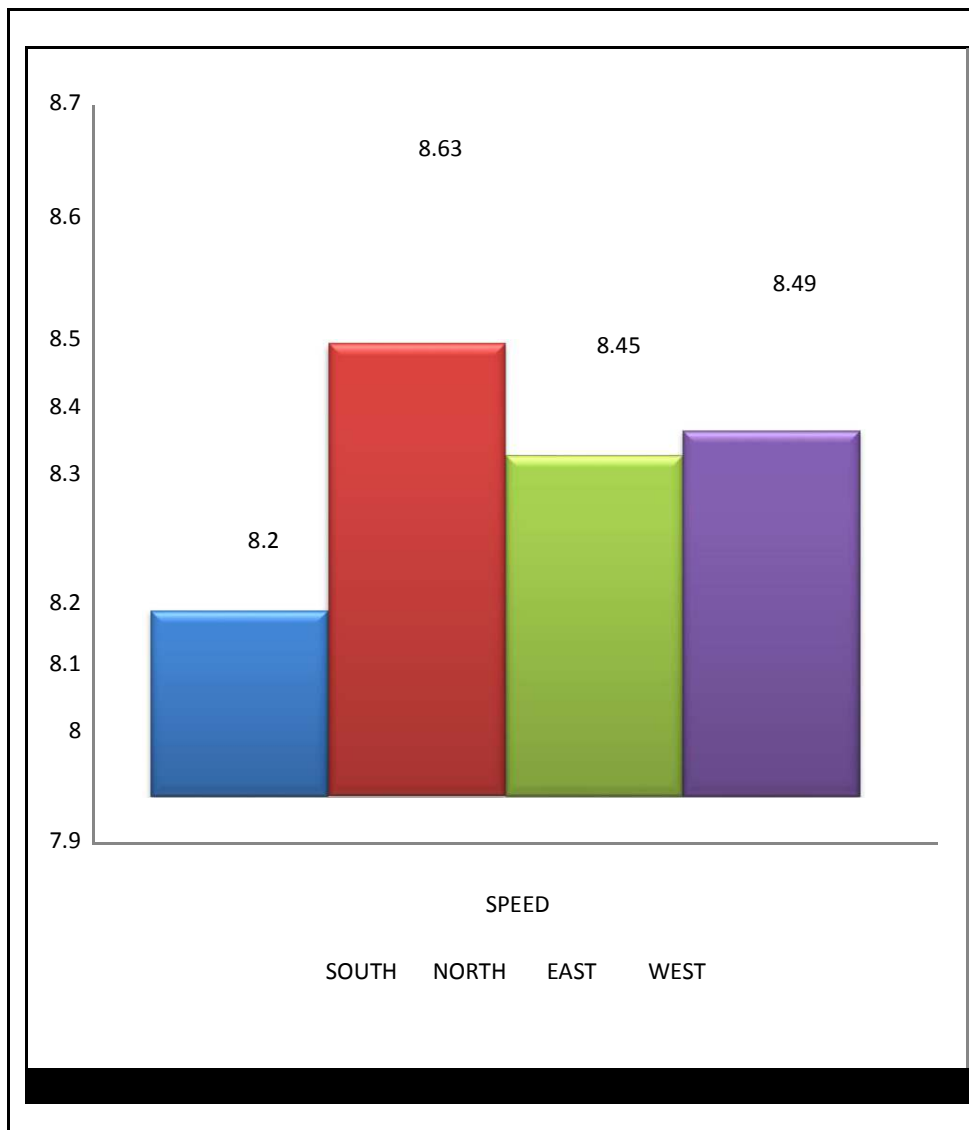


FIGURE I
GRAPHICAL REPRESENTATION OF MEAN SCORES OF
SPEED AMONG GROUPS

4.2.2 Agility

TABLE 4.4
DESCRIPTIVE SCORES ON AGILITY SCORES AMONG GROUPS
(Scores in Seconds)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	11.97	0.98	10.01	14.05	4.04
NORTH	11.83	0.77	10.04	14.08	4.04
EAST	11.99	0.80	10.39	14.05	3.66
WEST	11.92	0.92	10.00	14.01	4.01

It is observed from table 4.4 that the mean value of south is 11.97, for north, it is 11.83 and for east, it is 11.99 and mean value of west is 11.92. The standard deviation is 0.98, 0.77, 0.80 and 0.92 respectively for south, north, east and west. The range of south is 4.04, north is 4.04 and that of east and west is 3.66 and 4.01 respectively.

TABLE 4.5
ANOVA OF AGILITY AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	0.63	3.00	0.21	0.28
WITH IN	0.63	3.00	0.21	
TOTAL	118.15	156.00	0.76	

*Significant at .05 level for the degrees of freedom (3,156) 2.70

Table 4.5 shows the obtained 'f' ratio value 0.28 which was lower than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a no significant difference on agility among south, north, east and west zone women football players.

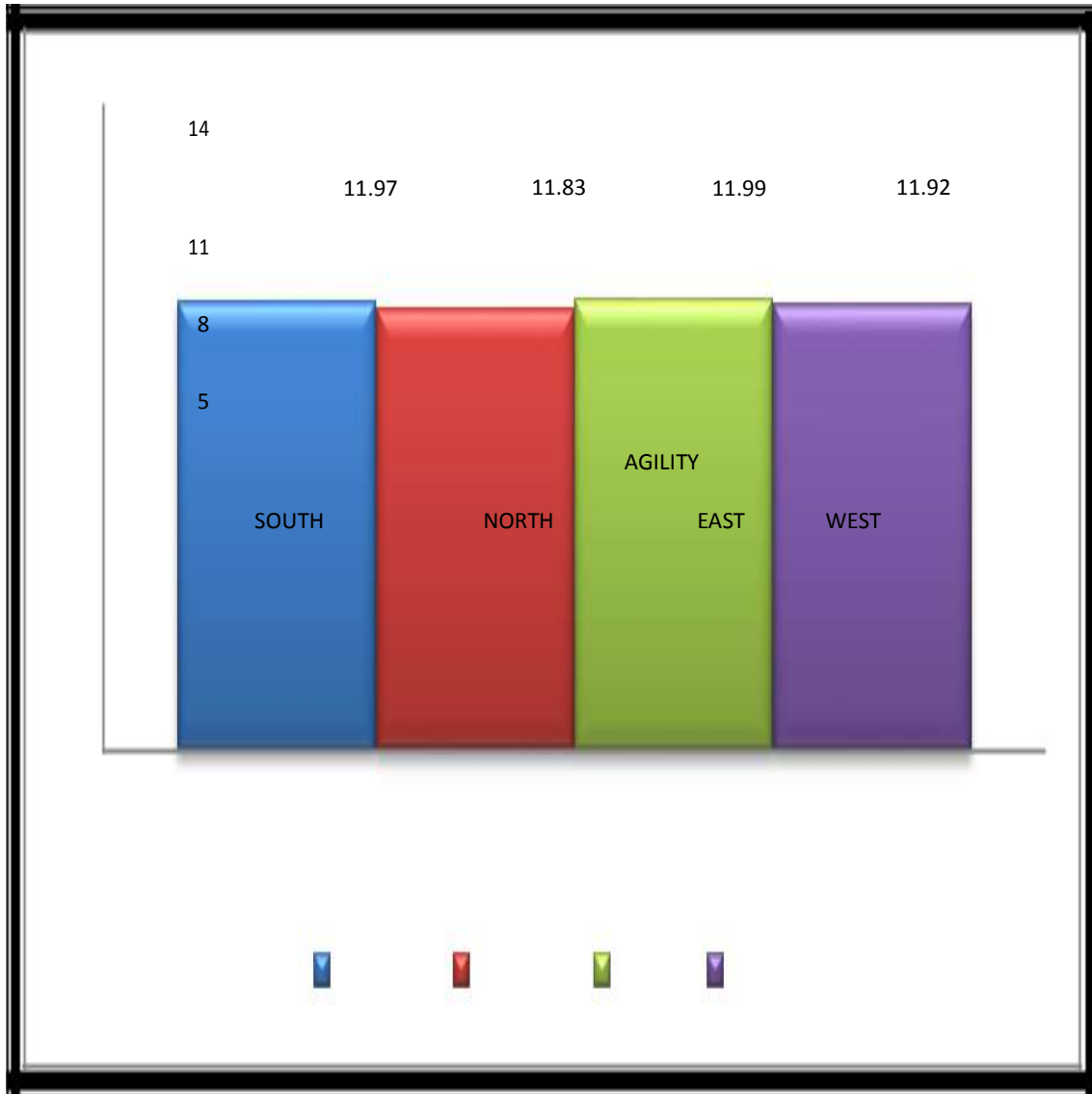


FIGURE II
GRAPHICAL REPRESENTATION OF MEAN SCORES OF
AGILITY AMONG GROUPS

4.2.3 Leg explosive power

TABLE 4.6
DESCRIPTIVE SCORES ON LEG EXPLOSIVE POWER SCORES
AMONG GROUPS
(Scores in Centimeter)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	0.3733	0.0362	0.3000	0.4500	0.1500
NORTH	0.3740	0.0328	0.3100	0.4400	0.1300
EAST	0.3745	0.0373	0.3000	0.4400	0.1400
WEST	0.3718	0.0354	0.3000	0.4400	0.1400

Table 4.6 shows that the mean value of south is 0.3733, for north, it is 0.3740 and for east, it is 0.3745 and mean value of west is 0.3718. The standard deviation is 0.0362, 0.0328, 0.0373 and 0.0354 respectively for south, north, east and west. The range of south is 0.15, north is 0.13 and that of east and west is 0.14 and 0.14 respectively.

TABLE 4.7
ANOVA OF LEG EXPLOSIVE POWER AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	0.0002	3.0000	0.0001	0.0457
WITH IN	0.1964	156.0000	0.0013	
TOTAL	0.1966	159.0000		

*Significant at .05 level for the degrees of freedom (3.156) 2.70

Table 4.8 shows the obtained 'f' ratio value 0.045 which was lower than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a no significant difference on leg explosive power among south, north, east and west zone women football players.

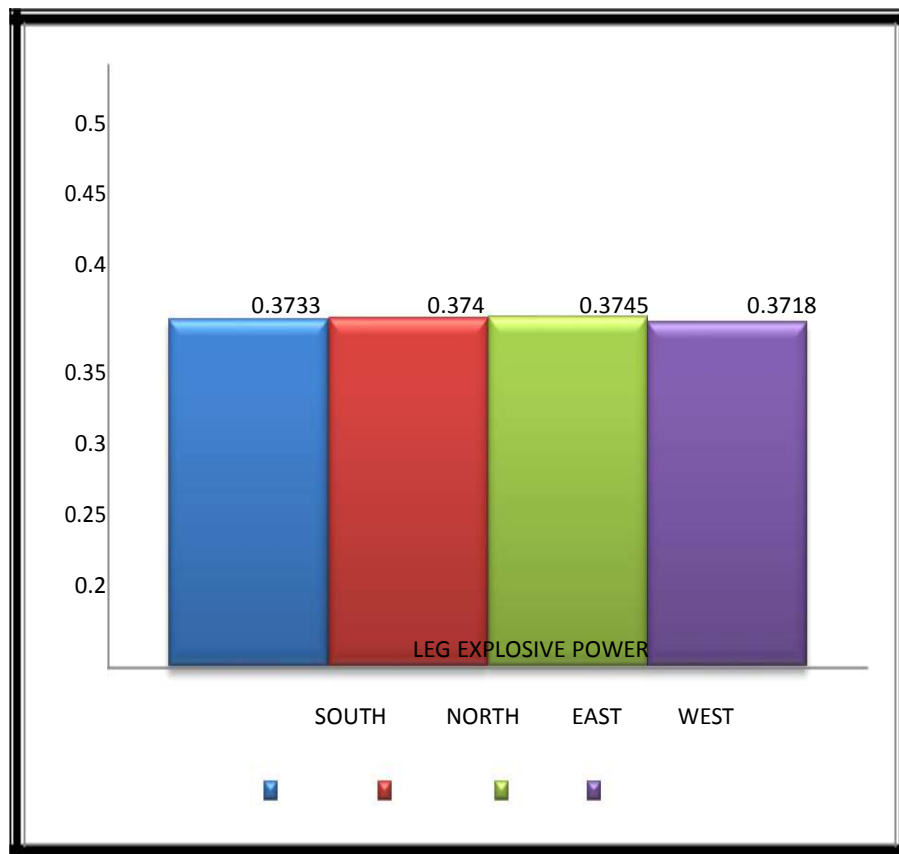


FIGURE III
GRAPHICAL REPRESENTATION OF MEAN SCORES OF LEG
EXPLOSIVE POWER AMONG GROUPS

4.2.4 Anaerobic capacity

TABLE 4.8
DESCRIPTIVE SCORES ON ANAEROBIC CAPACITY
AMONG GROUPS
(Scores in Minutes)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	95.01	5.08	81.01	104.30	23.29
NORTH	94.98	5.23	80.00	104.30	24.30
EAST	94.64	5.59	80.00	105.28	25.28
WEST	94.50	5.25	80.00	105.28	25.28

It is observed from table 4.8 that the mean value of south is 95.01, for north, it is 94.98 and for east, it is 94.64 and mean value of west is 94.50. The standard deviation is 5.08, 5.23, 5.59 and 5.25 respectively for south, north, east and west. The range of south is 23.29, north is 24.30 and that of east and west is 25.28 and 25.28 respectively.

TABLE 4.9
ANOVA OF ANAEROBIC CAPACITY AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	7.70	3.00	2.57	0.09
WITH IN	4365.62	156.00	27.98	
TOTAL	4373.32	159.00		

*Significant at .05 level for the degrees of freedom (3,156) 2.70

Table 4.2 shows the obtained 'f' ratio value 0.09 which was lower than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a no significant difference on anaerobic capacity among south, north, east and west zone women football players.

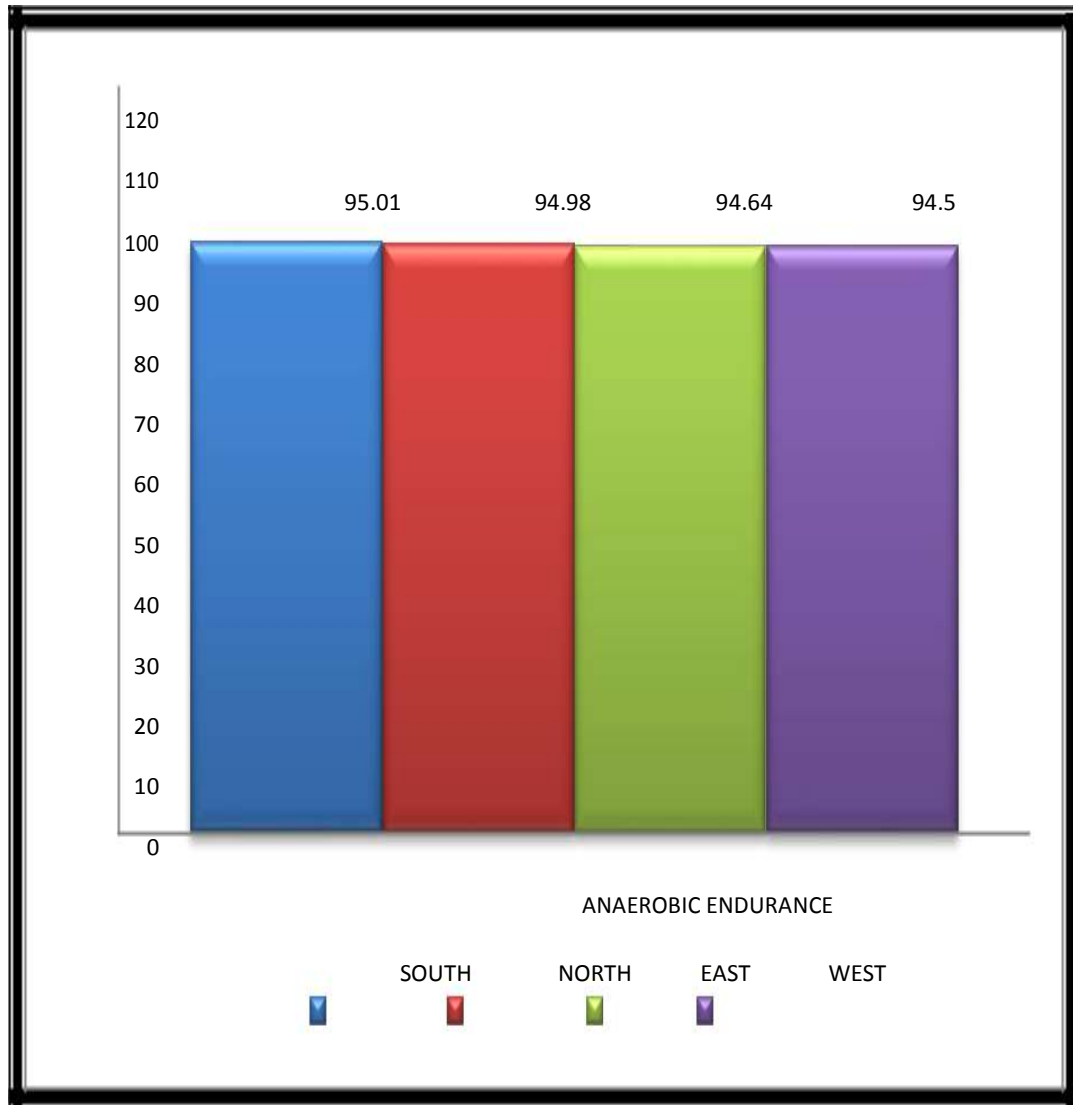


FIGURE IV
GRAPHICAL REPRESENTATION OF MEAN SCORES OF ANAEROBIC CAPACITY AMONG GROUPS

4.2.5 Muscular Strength Endurance

TABLE 4.10
DESCRIPTIVE SCORES ON MUSCULAR STRENGTH ENDURANCE
AMONG GROUPS
(Scores in Numbers)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	35.05	6.35	26.00	49.00	23.00
NORTH	34.50	5.61	27.00	50.00	23.00
EAST	34.83	6.74	26.00	52.00	26.00
WEST	34.35	6.10	26.00	51.00	25.00

Table 4.10 revealed that the mean value of south is 35.05, for north, it is 34.50 and for east, it is 34.83 and mean value of west is 34.35. The standard deviation is 6.35, 5.61, 6.74 and 6.10 respectively for south, north, east and west. The range of south is 23, north is 23 and that of east and west is 26 and 25 respectively.

TABLE 4.11
ANOVA OF MUSCULAR STRENGTH ENDURANCE AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	11.97	3.00	3.99	0.10
WITH IN	6026.77	156.00	38.63	
TOTAL	6038.74	159.00		

*Significant at .05 level for the degrees of freedom (3.156) 2.70

Table 4.14 shows the obtained 'f' ratio value 0.10 which was lower than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a no significant difference on muscular strength endurance among south, north, east and west zone women football players.

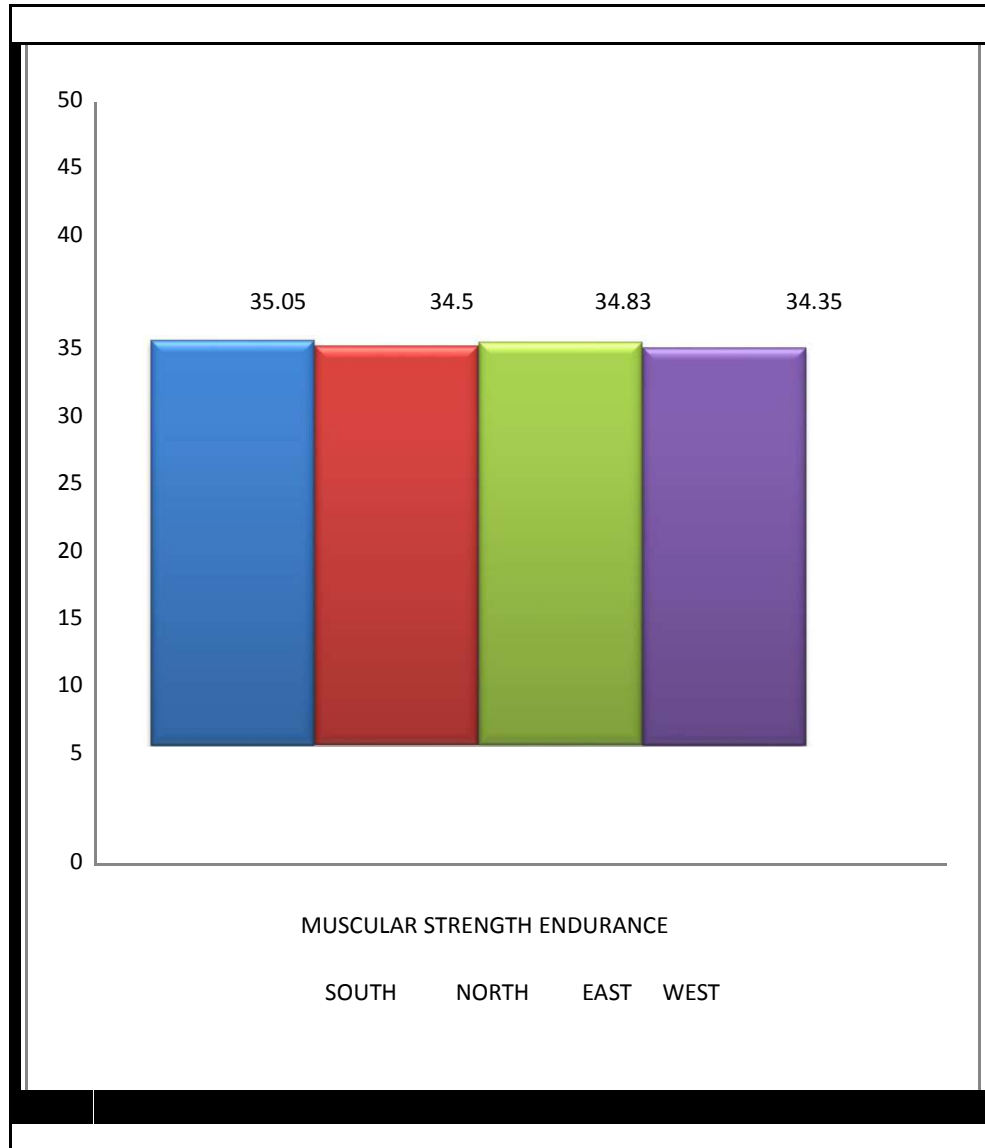


FIGURE V
GRAPHICAL REPRESENTATION OF MEAN SCORES OF MUSCULAR STRENGTHENDURANCE AMONG GROUPS

4.2.6 Cardio respiratory endurance

Table 4.12
DESCRIPTIVE SCORES ON CARDIO RESPIRATORY ENDURANCE
AMONG GROUPS
(Scores in Seconds)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	2.37	0.25	1.59	2.89	1.30
NORTH	2.49	0.27	2.06	3.03	0.97
EAST	2.41	0.22	2.01	3.03	1.02
WEST	2.57	0.33	2.00	3.20	1.20

It is observed from table 4.12 that the mean value of south is 2.37, for north, it is 2.49 and for east, it is 2.41 and mean value of west is 2.57. The standard deviation is 0.25, 0.27, 0.22 and 0.33 respectively for south, north, east and west. The range of south is 1.30, north is 0.97 and that of east and west is 1.02 and 1.20 respectively.

TABLE 4.13

ANOVA OF CARDIO RESPIRATORY ENDURANCE AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	0.91	3.00	0.30	4.17*
WITH IN	11.37	156.00	0.07	
TOTAL	12.28	159.00		

*Significant at .05 level for the degrees of freedom (3,156) 2.70

Table 4.17 shows the obtained 'f' ratio value 4.17 which was greater than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a significant difference on cardio respiratory endurance among south, north, east and west zone women football players.

TABLE 4.14

**PAIR WISE COMPARISON OF MEAN SCORES OF CARDIO
RESPIRATORY ENDURANCE AMONG GROUPS**

(Scores in Seconds)

SOUTH	NORTH	EAST	WEST	MD	CD
2.37	2.49			0.12*	0.12
2.37		2.41		0.04	
2.37			2.57	0.20*	
	2.49	2.41		0.07	
	2.49		2.57	0.08	
		2.41	2.57	0.16*	

*Significant at .05 level of confidence

From the table 4.14, it is clear that the mean difference value of 2.37, and 0.20 when south zone women football players is compared with north and west zone players respectively, proved to significant since these values are higher than the critical difference of 0.12. And also clear that the mean difference value of 0.16 when east zone women football players is compared with west zone players, proved to significant since this value is higher than the critical difference of 0.12

The result of the study showed that there was a significant difference between south and north, south and east, south and west, north and east, north and west, east and west on cardio respiratory endurance.

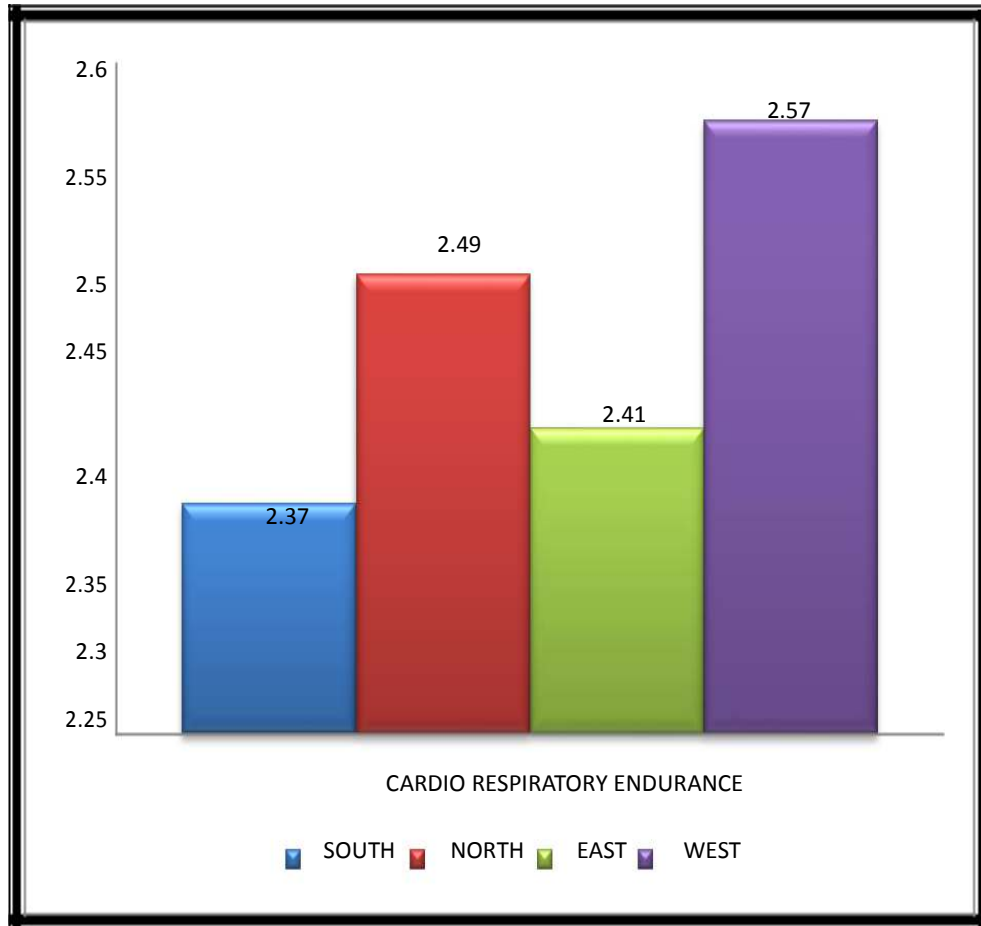


FIGURE VI

**GRAPHICAL REPRESENTATION OF MEAN SCORES OF CARDIO
RESPIRATORY ENDURANCE AMONG GROUPS**

4.3 Selected psychological variables

4.3.1 Competitive state anxiety

TABLE 4.15

DESCRIPTIVE SCORES ON COMPETITIVE STATE ANXIETY AMONG GROUPS

(Score in Numbers)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	21.20	3.49	12.00	28.00	16.00
NORTH	19.73	3.73	9.00	27.00	18.00
EAST	19.48	2.40	13.00	26.00	13.00
WEST	20.58	3.21	17.00	30.00	13.00

It is observed from table 4.15 that the mean value of south is 21.20, for north, it is 19.73 and for east, it is 19.48 and mean value of west is 20.58. The standard deviation is 3.49, 3.73, 2.40 and 3.21 respectively for south, north, and west. The range of south is 16, north is 18 and that of east and west is 13 and 13 respectively.

Table 4.16

ANOVA OF COMPETITIVE STATE ANXIETY AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	75.37	3.00	25.12	2.39
WITH IN	1642.13	156.00	10.53	
TOTAL	1717.49	159.00		

*Significant at .05 level for the degrees of freedom (3,156) 2.70

Table 4.20 shows the obtained 'f' ratio value 2.39 which was lower than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a no significant difference on competitive state anxiety among south, north, east and west zone women football players.

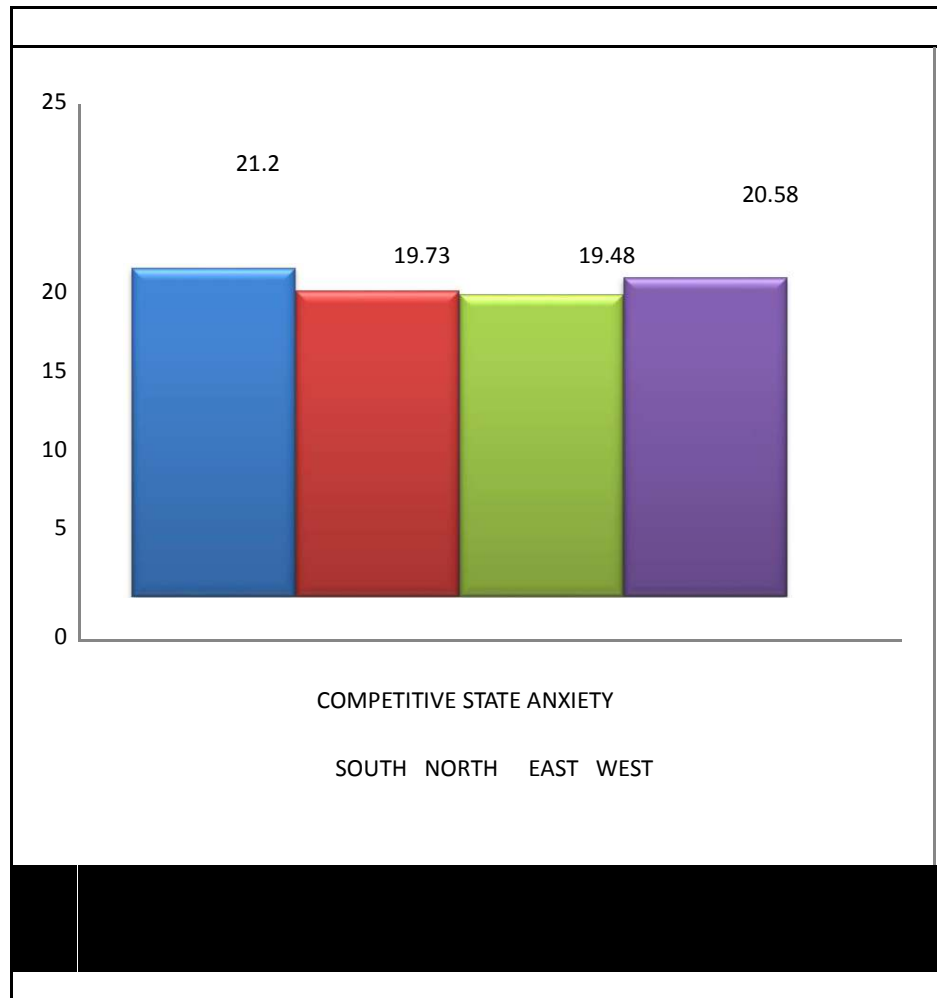


FIGURE VII
GRAPHICAL REPRESENTATION OF MEAN SCORES OF COMPETITIVE
STATE ANXIETY AMONG GROUPS

4.3.2 Aggression

TABLE 4.17
DESCRIPTIVE SCORES ON AGGRESSION AMONG GROUPS
(Score in Numbers)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	26.50	1.65	21.00	29.00	8.00
NORTH	30.60	5.67	23.00	43.00	20.00
EAST	28.40	7.72	10.00	41.00	31.00
WEST	27.28	5.18	23.00	38.00	15.00

From table 4.17, the mean value of south is 26.50, for north, it is 30.60 and for east, it is 28.40 and mean value of west is 27.28. The standard deviation is 1.65, 5.67, 7.72 and 5.18 respectively for south, north, east and west. The range of south is 8, north is 20 and that of east and west is 31 and 15 respectively.

TABLE 4.18
ANOVA OF AGGRESSION AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	381.82	3.00	127.27	4.20*
WITH IN	4727.18	156.00	30.30	
TOTAL	5108.99	159.00		

*Significant at .05 level for the degrees of freedom (3.156) 2.70

Table 4.18 shows the obtained 'f' ratio value 4.20 which was greater than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a significant difference on aggression among south, north, east and west zone women football players.

TABLE 4.19
PAIR WISE COMPARISON OF MEAN SCORES OF
AGGRESSION AMONG GROUPS
(Scores in Numbers)

SOUTH	NORTH	EAST	WEST	MD	CD
26.50	30.60			4.10*	2.41
26.50		28.40		1.90	
26.50			27.28	0.77	
	30.60	28.40		2.20	
	30.60		27.28	3.33*	
		28.40	27.28	1.13	

*Significant at .05 level of confidence

From the table 4.19, it is clear that the mean difference value of 4.10 when south zone women football players is compared with north zone players and mean difference value of 3.33 when north zone women football players is compared with west zone players proved to significant since this value is higher than the critical difference of 2.41.

The result of the study showed that there was a significant difference between south and north, south and east, south and west, north and east, north and west, east and west on aggression.

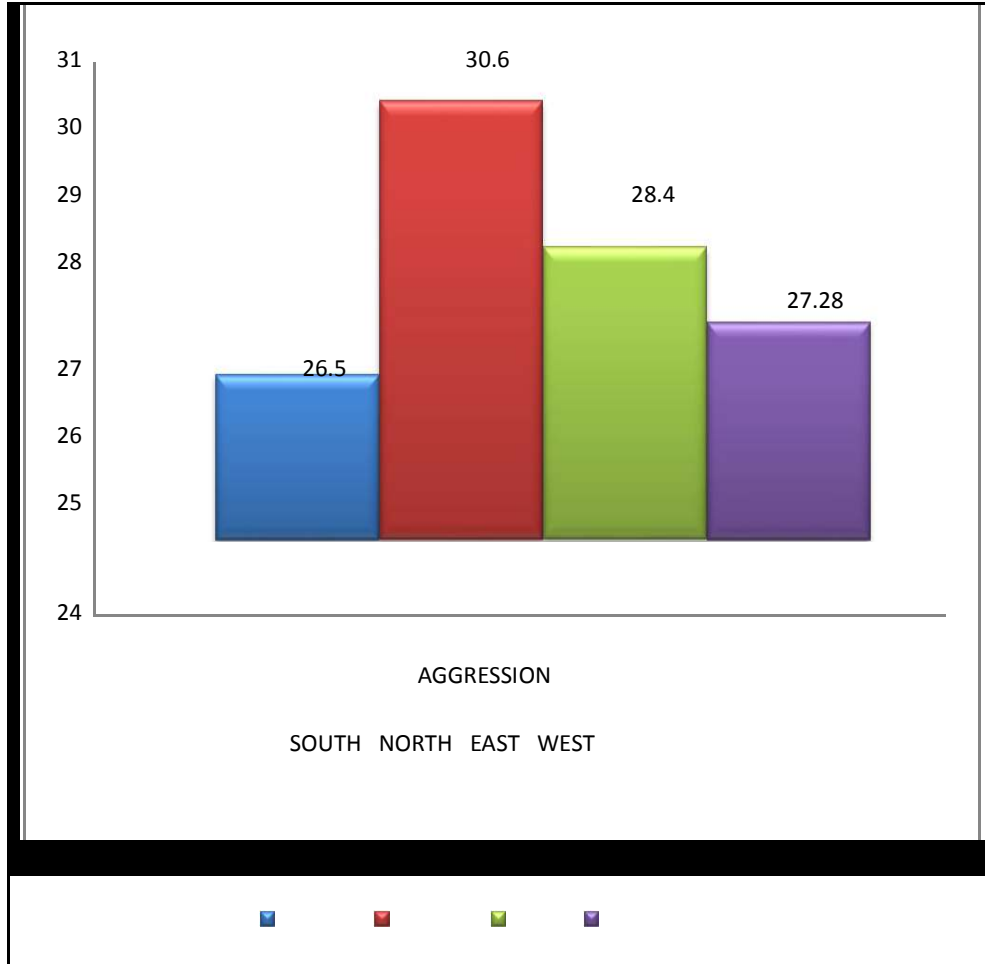


FIGURE VIII
GRAPHICAL REPRESENTATION OF MEAN SCORES OF
AGGRESSION AMONG GROUPS

4.3.3 Mental Toughness

TABLE 4.20

DESCRIPTIVE SCORES ON MENTAL TOUGHNESS AMONG GROUPS

(Scores in Numbers)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	157.70	28.32	40.00	174.00	134.00
NORTH	164.83	8.06	142.00	185.00	43.00
EAST	169.60	23.45	81.00	203.00	122.00
WEST	146.60	20.70	105.00	193.00	88.00

From table 4.20, the mean value of south is 157.70, for north, it is 164.83 and for east, it is 169.60 and mean value of west is 146.60. The standard deviation is 28.32, 8.06, 23.45 and 20.70 respectively for south, north, east and west. The range of south is 134, north is 43 and that of east and west is 122 and 88 respectively.

TABLE 4.21

ANOVA OF MENTAL TOUGHNESS AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	11995.37	3.00	3998.46	8.67*
WITH IN	71963.38	156.00	461.30	
TOTAL	83958.74	159.00		

*Significant at .05 level for the degrees of freedom (3,156) 2.70

Table 4.19 shows the obtained 'f' ratio value 8.67 which was greater than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a significant difference on mental toughness among south, north, east and west zone women football players.

TABLE 4.22
PAIR WISE COMPARISON OF MEAN SCORES OF MENTAL
TOUGHNESS AMONG GROUPS

(Scores in Numbers)

SOUTH	NORTH	EAST	WEST	MD	CD
157.70	164.83			7.13	9.41
157.70		169.60		11.90*	
157.70			146.60	11.10*	
	164.83	169.60		4.78	
	164.83		146.60	18.23*	
		169.60	146.60	23.00*	

*Significant at .05 level of confidence

From the table 4.22, it is clear that the mean difference value of 11.90 and 11.10 when south zone women football players is compared with east and west zone players respectively and mean difference value of 18.23 and 23 when west zone women football players is compared with north and east zone players respectively proved to significant since these values are higher than the critical difference of 9.41.

The result of the study showed that there was a significant difference between south and north, south and east, south and west, north and east, north and west, east and west on mental toughness.

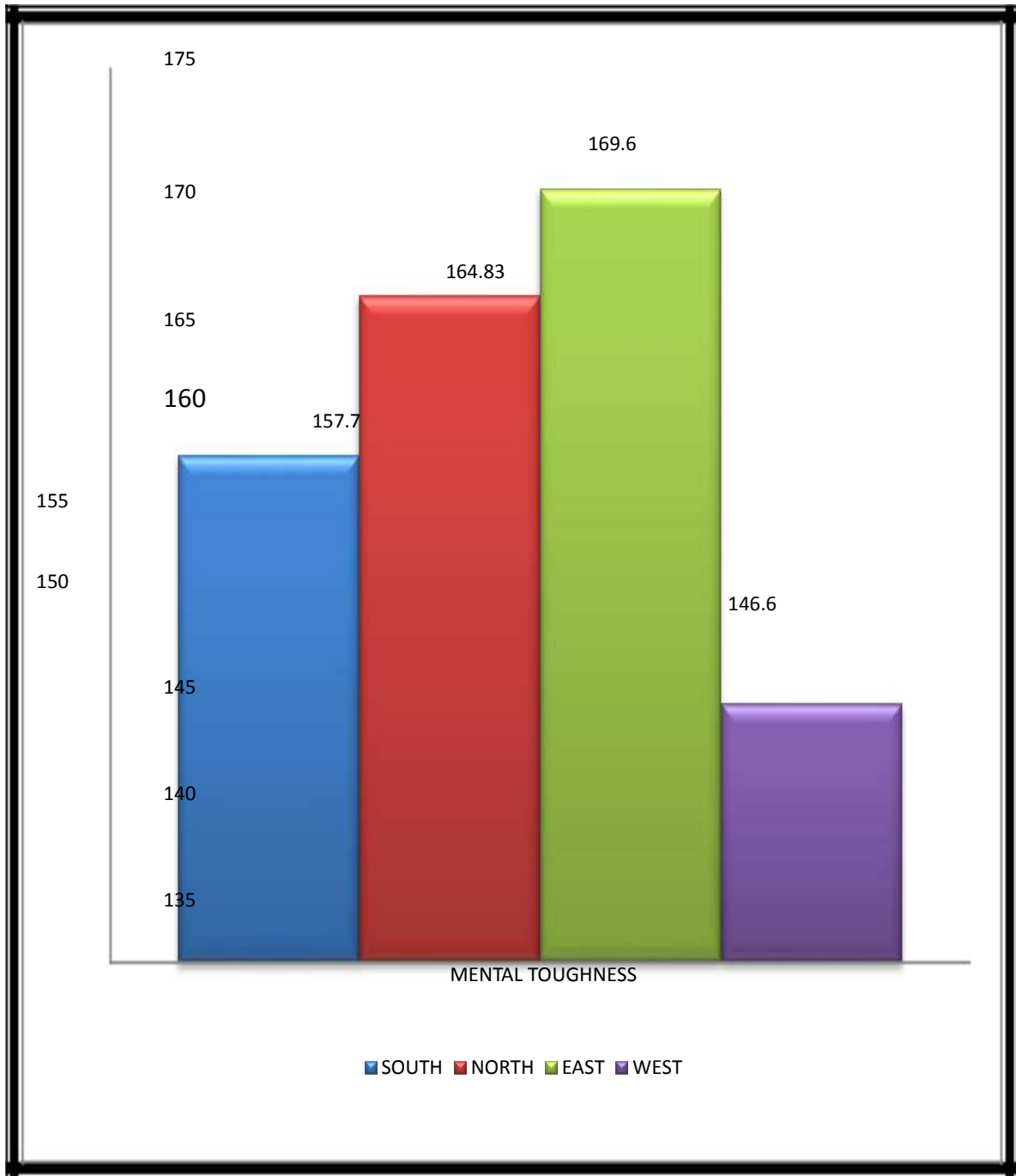


FIGURE IX
GRAPHICAL REPRESENTATION OF MEAN SCORES OF MENTAL TOUGHNESS AMONG GROUPS

4.3.4 Achievement motivation

TABLE 4.23

DESCRIPTIVE SCORES ON ACHIEVEMENT MOTIVATION

AMONG GROUPS

(Scores in Numbers)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	25.70	2.38	20.00	30.00	10.00
NORTH	22.48	4.11	18.00	30.00	12.00
EAST	26.40	4.42	16.00	32.00	16.00
WEST	22.80	5.12	10.00	30.00	20.00

From table 4.23, the mean value of south is 25.70, for north, it is 22.48 and for east, it is 26.40 and mean value of west is 22.80. The standard deviation is 2.38, 4.11, 4.22 and 5.12 respectively for south, north, east and west. The range of south is 10, north is 12 and that of east and west is 16 and 20 respectively.

TABLE 4.24

ANOVA OF ACHIEVEMENT MOTIVATION AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	477.72	3.00	159.24	9.32*
WITH IN	2664.38	156.00	17.08	
TOTAL	3142.09	159.00		

*Significant at .05 level for the degrees of freedom (3.156) 2.70

Table 4.19 shows the obtained 'f' ratio value 9.32 which was greater than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a significant difference on achievement motivation among south, north, east and west zone women football players.

TABLE 4.25
PAIR WISE COMPARISON OF MEAN SCORES OF ACHIEVEMENT
MOTIVATION AMONG GROUPS

(Scores in Numbers)

SOUTH	NORTH	EAST	WEST	MD	CD
25.70	22.48			3.23*	1.81
25.70		26.40		0.70	
25.70			22.80	2.90*	
	22.48	26.40		3.93*	
	22.48		22.80	0.32	
		26.40	22.80	3.60*	

*Significant at .05 level of confidence

From the table 4.22, it is clear that the mean difference value of 3.23 and 2.90 when south zone women football players is compared with north and west zone players respectively and mean difference value of 3.93 and 3.60 when east zone women football players is compared with north and west zone players respectively proved to be significant since these values are higher than the critical difference of 1.81.

The result of the study showed that there was a significant difference between south and north, south and east, south and west, north and east, north and west, east and west on achievement motivation.

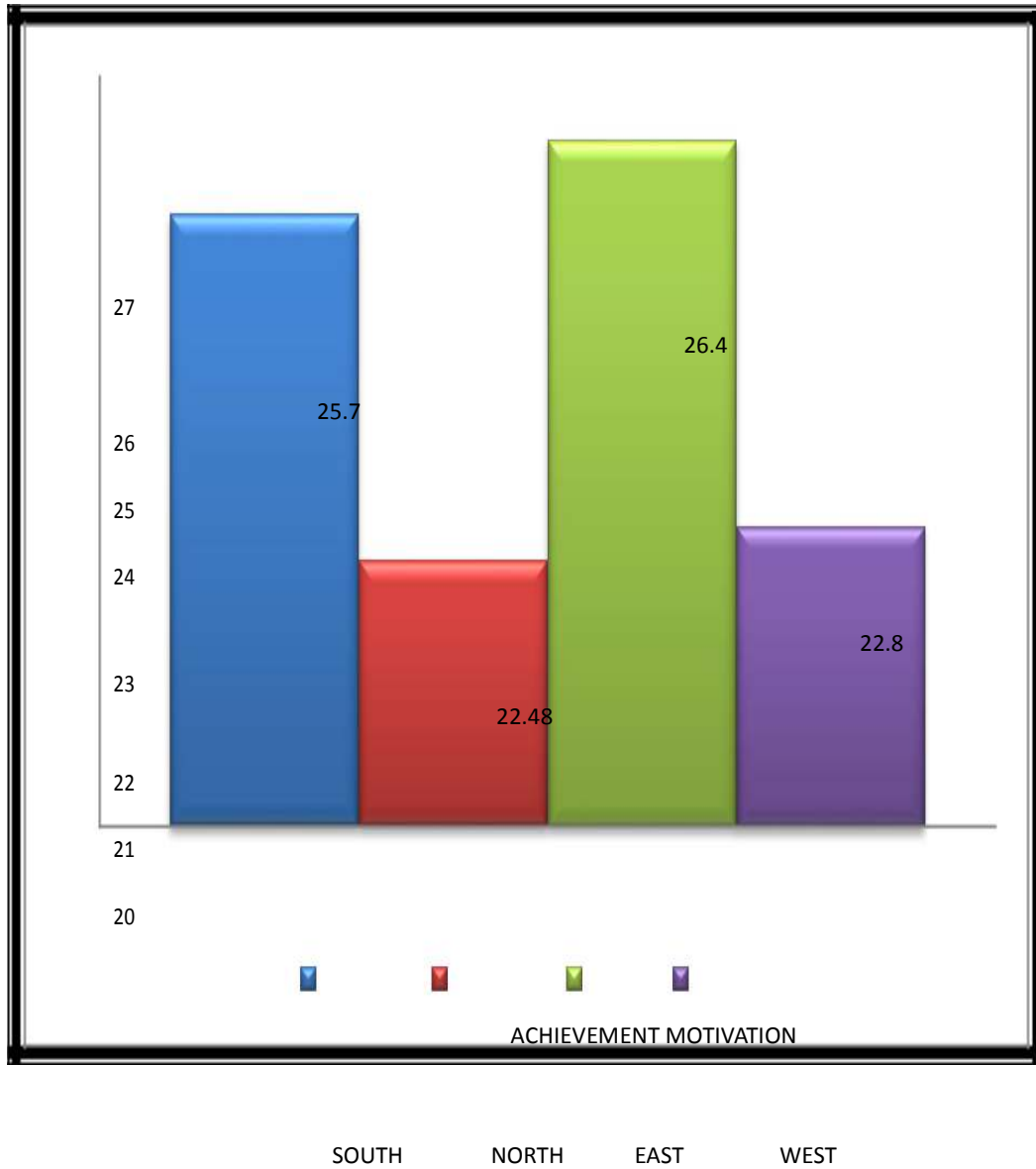


FIGURE X
GRAPHICAL REPRESENTATION OF MEAN SCORES OF ACHIEVEMENT MOTIVATION AMONG GROUPS

4.3.5 Self confidence

TABLE 4.26

DESCRIPTIVE SCORES ON SELF CONFIDENCE AMONG GROUPS

(Scores in Numbers)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	66.88	9.96	38.00	85.00	47.00
NORTH	65.58	11.98	45.00	86.00	41.00
EAST	65.33	8.77	47.00	86.00	39.00
WEST	63.70	8.92	48.00	80.00	32.00

From table 4.26, the mean value of south is 66.88, for north, it is 65.58 and for east, it is 65.33 and mean value of west is 63.70. The standard deviation is 9.96, 11.98, 8.77 and 8.92 respectively for south, north, east and west. The range of south is 47, north is 41 and that of east and west is 39 and 32 respectively.

TABLE 4.27

ANOVA OF SELF CONFIDENCE AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	203.92	3.00	67.97	0.68
WITH IN	15573.33	156.00	99.83	
TOTAL	15777.24	159.00		

*Significant at .05 level for the degrees of freedom (3,156) 2.70

Table 4.24 shows the obtained 'f' ratio value 0.68 which was lower than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a no significant difference on self-confidence among south, north, east and west zone women football players.

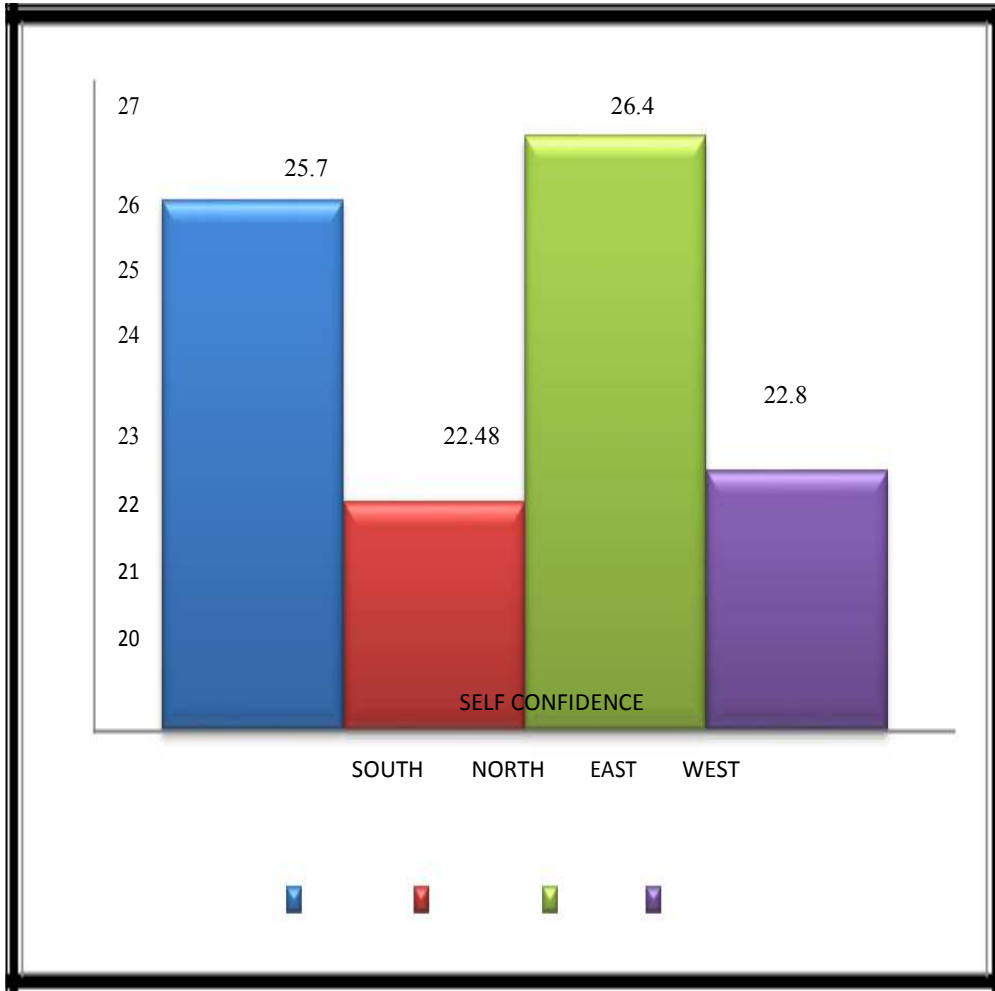


FIGURE XI
GRAPHICAL REPRESENTATION OF MEAN SCORES ON SELF
CONFIDENCE AMONG GROUPS

4.3.6 Team cohesion

TABLE 4.28

DESCRIPTIVE SCORES ON TEAM COHESION AMONG GROUPS

(Scores in Numbers)

ZONE	MEAN	SD	MIN	MAX	RANGE
SOUTH	123.03	14.08	69.00	140.00	71.00
NORTH	123.15	20.70	61.00	154.00	93.00
EAST	113.33	26.54	34.00	160.00	126.00
WEST	86.50	35.18	42.00	150.00	108.00

From table 4.28, the mean value of south is 123.03, for north, it is 123.15 and for east, it is 113.33 and mean value of west is 86.50. The standard deviation is 14.08, 20.70, 26.54 and 35.18 respectively for south, north, east and west. The range of south is 71, north is 93 and that of east and west is 126 and 108 respectively.

TABLE 4.29

ANOVA OF TEAM COHESION AMONG THE GROUP

SOURCES	SS	DF	MS	F RATIO
BETWEEN	35875.15	3.00	11958.38	18.62*
WITH IN	100172.85	156.00	642.13	
TOTAL	35875.15	159.00		

Table 4.26 shows the obtained 'f' ratio value 18.62 which was lower than the required table value 2.70 with df 3 and 156 at 0.05 level of confidence.

The result of the study showed that there was a significant difference on team cohesion among south, north, east and west zone women football players.

TABLE 4.30

PAIR WISE COMPARISON OF MEAN SCORES OF TEAM COHESION AMONG GROUPS

(Scores in Numbers)

SOUTH	NORTH	EAST	WEST	MD	CD
123.03	123.15			0.13	11.11
123.03		113.33		9.70	
123.03			86.50	36.53*	
	123.15	113.33		9.83	
	123.15		86.50	36.65*	
		113.33	86.50	26.83*	

*Significant at .05 level of confidence

From the table 4.22, it is clear that the mean difference value of 36.53, 36.65 and 26.83 when west zone women football players is compared with south, north and east zone players respectively proved to significant since these values are higher than the critical difference of 11.11.

The result of the study showed that there was a significant difference between south and north, south and east, south and west, north and east, north and west, east and west on team cohesion.

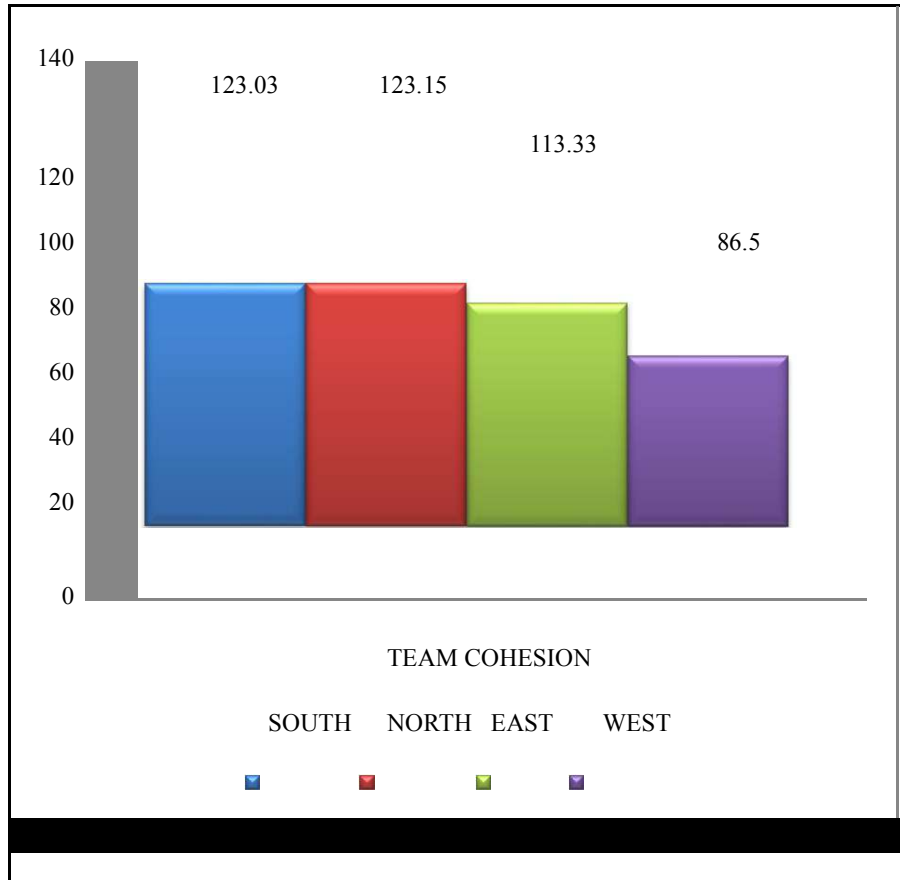


FIGURE XII

GRAPHICAL REPRESENTATION OF MEAN SCORES OF TEAM

COHESION AMONG GROUPS

4.4 Discussion of Findings

The present study analyzed the motor fitness and psychological parameters among inter University women football players of different topography (south, north, east and west zone). In this study it has been identified that there is a significant difference in the motor fitness variables (Speed and Cardio respiratory endurance) and psychological variables (aggression, mental toughness, achievement motivation and team cohesion) of women football players of different topography (south, north, east and west zone).

Performance in a soccer match depends on a variety of factors such as skills, tactics, and players' physiological, physical and mental capacities (**Stolen et al., 2005**). Small changes in these capacities can have significant effects on the development and result of a match and/or a championship (**Chelly et al., 2009; Comfort et al., 2012; Stolen et al., 2005**).

4.4.1 Discussion on Motor Fitness Variables

The motor fitness variables selected for the study were speed, agility, leg explosive power, anaerobic power, muscular strength endurance and cardio respiratory endurance.

Based on the motor fitness variables of the study the women football players of different topography (south, north, east and west zone), It has been found that there is a significant difference in speed and cardio respiratory endurance of women football players of different topography (south, north, east and west zone). The investigator also found that the women football players

from south zone showed the maximum speed and better cardio respiratory endurance among the selected samples.

Speed and aerobic endurance are major parts in the game of football. The performance is positively related with speed. The scholar revealed that from the south zone football players are much better than the other zones. In the south, most of the players were selected from the state of Kerala and their playing strategy was long and though passes game. Thus, it might be the reason of the maximum speed and cardio respiratory endurance of south zone football players.

The physiological demands of a football game are those of intermittent and high intensity efforts, with high energy expenditure (**Villanueva et al., 2011**) Aerobic power is an important variable in this context because it acts in the recovery of such efforts, enabling a more effective participation of athletes during the match (**Bangsbo et al., 2006**)

Agility is defined as the capacity to rapidly change direction (**Sheppard et al., 2006**). Considering that soccer involves frequent changes of direction, we postulated that agility would be highly related to muscle strength. Soccer requires players to move, whether it's forward, backwards or sideways. Some of the basic agility benefits for soccer players; Increase their ability to maintain balance, speed, strength and coordination, Improves the player's confidence and self-esteem and Helps reduce injury risks (**Ján Paškoet al., 2018**).

Soccer requires an excellent combination of strength, speed, power and endurance to excel on the field of play. Implementing VertiMax in your soccer

strength training program will dramatically increase explosive leg power and speed endurance to radically elevate any player's game (**Vertimax, 2018**).

Performance in soccer results from a combination of physiological, psychological, social and environmental factors. Among the physiological factors, both physical fitness and the metabolic demands of game play have been well-studied in elite adult players, although recently there is an increased scientific interest in the physiological predisposition of young players for future excellence (**Reilly et al., 2000**). In spite of the popularity of soccer in adolescence and the foundation of several professional schools for young players, few studies have been published regarding physiological characteristics and, in particular, the anaerobic power of these athletes (**Vanderford et al., 2004**).

In the game of soccer, every player needs a pretty strong lower body to kick, jump and to make explosive starts. In soccer, muscular endurance is defined as; the ability of one or several muscle groups to perform repeated and high intensity movements. Player's muscular endurance is crucial for their game and power; it is which is more essential than strength (**Soccer-training-guide, 2018**)

It has been found that there is no significant difference in agility, leg explosive power, anaerobic capacity and muscular strength endurance of women football players of different topography (south, north, east and west zone). Since agility, leg explosive power, anaerobic capacity and muscular strength endurance are some of the important factors of the football game, the

coaches and trainers of all the state teams might have given adequate training sessions to develop these qualities to the selected samples that represented the concerned state teams for national championships. This might be the reason which lead the study to identify that there is no significant difference in agility, leg explosive power, anaerobic capacity and muscular strength endurance of women football players of different topography (south, north, east and west zone).

4.6 Discussion on psychological factors

The psychological factors selected for the study were competitive state anxiety, aggression, mental toughness, achievement motivation, self confidence and team cohesion.

The sports performance in competitive sports is determined by a combination of psycho-physiological factors, technical skill, tactical insight and state of mind. Psychology has enormous potential and it is really an exciting and challenging field of knowledge. It continues to grow at an accelerating pace and offers us the hope of both understanding and improving our lives. Football is basically a team game. It has developed into a highly skillful area. In football generally players are divided into two categories. Offensive and defensive players are meant for scoring by combining their techniques and tactics. Most sport psychology researchers recommended that confidence is an essential contributor to optimal sport performance and important psychological factor that affects sport performance. Elite athletes repeatedly have to perform under high pressure, motivated and more self-confident to do well in their

respective event at the highest standard compared to non-elite athletes
(**Goswami et al., 2016**)

Considering the psychological factors of the study in the women football players of different topography (south, north, east and west zone), it has been found that there is no significant difference sports competitive anxiety and self-confidence of women football players of different topography (south, north, east and west zone).

According to **Kumar et al., 2007** an individual feels mentally disturbed, when he is in an anxious mood. Anxiety in the field of physical education and sports activities are concerned, it is said that anxiety is most common in more competitive sports environment. According to **Robinson et al., 2011** anxiety and sports are deeply related with each other. He further stated that anxiety is not always bad but it can help the players in focusing and alerting in performing their actions. While participating in various sports activities, it is observed that the participants get anxious.

The term self-confidence refers to one's belief that he or she can successfully execute a desired behavior. Self-confidence (SC) is one of the most cited factors that affect soccer performance. Self-confidence is said to play a critical role in players' success; in contrast, lack of self-confidence seems to be closely associated with athletic failure. Thus, confidence is an important factor that distinguishes successful players from unsuccessful ones in terms of both their mental states as well as their performances (**D:L. Feltz, 1988**).

The research scholar found that many of the Indian women soccer players have similar level of confidence and anxious level. In the context of international women soccer, Indian women team had no much better performance history. And also Indian women team didn't get more exposure and competition. Thus it might be the reason behind the similarity in competitive sports anxiety and self confidence among women football players from different topography.

In light of the study on psychological factors of women football players of different topography (south, north, east and west zone), it has been found that there is a significant difference in the aggression, mental toughness, achievement motivation and team cohesion of women football players of different topography (south, north, east and west zone). The investigator also found that the women football players from north zone showed more aggressiveness and cohesiveness than the other zonal players.

Aggression is overt, often harmful, social interaction with the intention of inflicting damage or other unpleasantness upon another individual. It is a virtually universal behaviour among animals. It may occur either in retaliation or without provocation. In humans, frustration due to blocked goals can cause aggression. Submissiveness may be viewed as the opposite of aggressiveness. The initiation of an attack with the intent to injure" (**Bredemeier, 1983**) "A sequence of behaviour in which the goal is to injure another person" (**Dollard et al., 1939**) "A behaviour directed against a living target, in which there is a probability greater than zero of imparting a noxious

stimulus" (**Kaufman, 1970**) "Any form of behaviour directed toward the goal of harming or injuring another being who is motivated to avoid such treatment" (**Baron, 1977**)

Confidence is a quality found in many aspects of society. Therefore, confidence isn't a stranger to sport, when it can be associated with qualities like mental toughness, poise, grit, belief, courage, and heart. These qualities are descriptive verbs that are constantly used when describing someone who is successful. Recent research has shown that success has affected the level of confidence and confidence can affect success (**Covassin *et al.*, 2004; Hays, *et al.*, 2007; Maynard, *et al.*, 2009**). Elite athletes have revealed that confidence affects their performance through their thoughts, behaviors, and feelings (**Hays *et al.* 2009**).

The research scholar revealed that from the north zone, many of the players were selected from the state of Punjab. In this state, most of the men and women have better physique and psychological dominancy than the other zonal players. Thus it might be the reason of more aggressiveness and cohesiveness of north zone players.

Based on the psychological variables of the study the women football players of different topography (south, north, east and west zone), It has been found that there is a significant difference in the mental toughness and achievement motivation of women football players of different topography (south, north, east and west zone). The investigator also found that the women

football players from east zone showed high motivated and mentally toughed players than the rest of the zonal players.

A mentally tough soccer player can stay calm and loose under pressure; he/she can stay in control of their emotions and focused on the game even when an opponent is continually trash-talking, pulling at their jersey and playing dirty. A mentally tough soccer player can quickly bounce back from mistakes and bad calls, maintain intensity and confidence no matter how far down the team may be or how much time is left on the clock (**competitive guide, 2018**).

Achievement motivation is broader and focuses on athletes' predispositions towards striving for success and how specific situations influence their desires, emotions and behaviors (**Tod, 2014**). Competitiveness may be defined as the desire to reach a level of performance that is higher than others in the presence of evaluative others (**Weinberg et al., 2011**). Both psychologists and sport and exercise psychologists have focused on achievement goals as a way of understanding differences in achievement (**Duda et al., 1989**). According to achievement goal theory, three factors interact to determine a person's motivation: achievement goals, perceived ability, and achievement behavior.

The scholar discovered that from the east zone football players are much better in mental toughness and achievement motivation than the other zones. In the national level championship of the consecutive years (2010-11 and 2011-12), more teams from east zone were qualified for the semi finals and secured championship from east zone. In 2010-11 championship Odisha was the

champion and west Bengal was runner up. In the 2011-12 championship, Manipur and Odisha secured first and second place respectively. Thus, it might be the reason for the mental toughness and achievement motivation of east zone football players.

4.7 Discussion on Hypothesis

1. The first hypotheses of the study stated that there would be a significant difference in motor fitness components among south, north, east and west zone university women football players. The results of the study indicated that there is a significant difference in speed and cardio respiratory endurance among south, north, east and west zone university women football players. Hence, the investigator hypothesis was accepted with regards to the above variables. In case of the remaining variables agility, leg explosive power, anaerobic capacity and muscular strength endurance there is no significance difference among different zonal players. Hence, the hypothesis was rejected.
2. The second hypotheses of the study stated that women football players of south, north, east and west zone university would have similar psychological status. The results of the study indicated that there is a significant difference in aggression, mental toughness, achievement motivation and team cohesion among south, north, east and west zone university women football players. Hence the investigator hypothesis was accepted with regards to the above variables. In case of the remaining variables competitive anxiety and self-confidence there is no significance difference among different zonal players. Hence, the hypothesis was rejected.
3. The third hypotheses of the study stated that south zone inter university women football players would have better motor fitness and psychological

status than north, east and west zone players. The results of the study indicated that south zone inter university women football players would have better motor fitness namely speed, anaerobic power, muscular strength endurance, and psychological variables aggression and self-confidence than north, east and west zone university women football players. Hence the investigator hypothesis was accepted with regards to the above variables. In case of the remaining variables agility, leg explosive power, cardio respiratory endurance, competitive state anxiety, mental toughness and achievement motivation other zonal players have better status. Hence, the hypothesis is rejected.