Chapter-IV

Results and Discussions

CHAPTER-IV

RESULTS AND DISCUSSIONS

4.1 OVERVIEW

This chapter deals with the analysis of data collected from samples under study.

The purpose of this study was to find out the analysis of selected motor-sensory dimensions impact on sports performance among persons with locomotor disabilities. Subject age ranged from 28 to 35 years a male person with locomotor disabilities. They are designed total 232 persons with locomotor disabilities were selected subject of paraplegia 74, monoplegia 72, and polio 86. subjects based on the selected sports performance from para-athletic, wheelchair basketball, and wheelchair cricket in state and national-level tournaments.

This study formulated a static group comparison design. Study selected were motor dimensions variables strength endurance (SE), oxygen saturation (OX), and pulse rate (PR). The variables selected for the study were sensory dimension eye-hand coordination (EHC), reaction time (RT), motivation (MT), confidence (CF), anxiety control (AC), mental preparation (MP), and concentration (CN). In selected sports performance among persons with locomotor disabilities the present study. Data collected were analyzed with multiple correlation and one-way ANOVA to find out the source for such a significant mean difference as the Bonferroni post hoc test was applied, and the Pearson product-movement correlation was also calculated to find the relationship among selected variables.

4.2 TEST SIGNIFICANCE

In this study, the researcher conducted significance tests to determine whether the differences between the scores were statistically meaningful. When the calculated F value was greater than the critical value from the statistical table, the null hypothesis was rejected, indicating a significant difference between the group means. On the other hand, if the F value was lower than the critical value, the null hypothesis was not rejected, suggesting there was no significant difference between the means. This method enabled the researcher to assess variations across the groups being studied.

4.3 LEVEL OF SIGNIFICANCE

In this study, a significance level of 0.05 was selected and considered appropriate for evaluating the results obtained from the variables

TABLE - VI

OVERALL COEFFICIENT CORRELATION VALUES OF MOTOR-SENSORY DIMENSIONS VARIABLES AND SPORTS PERFORMANCE OF PERSONS WITH LOCOMOTOR DISABILITIES

VARIABLES	SE	EHC	RT	OX	PR	MT	CF	AC	MP	TE	CN	SP
Strength endurance	1	.94*	.96*	.95*	.92*	.98*	.99*	.99*	.98*	.98*	.92*	.98*
Eye-hand coordination		1	.98*	.94*	.97*	.97*	.97*	.95*	.89*	.96*	.84*	.89*
Reaction time			1	.97*	.96*	.98*	.98*	.97*	.94*	.96*	.90*	.93*
Oxygen saturation				1	.94*	.95*	.94*	.94*	.91*	.93*	.89*	.91*
Pulse rate					1	.95*	.94*	.93*	.88*	.93*	.83*	.87*
Motivation						1	.99*	.99*	.97*	.99*	.92*	.97*
Confidence							1	.99*	.97*	.99*	.90*	.97*
Anxiety control								1	.98*	.99*	.93*	.98*
Mental Preparation									1	.98*	.95*	.99*
Team Emphasis										1	.91*	.98*
Concentration											1	.95*
Sports Performance												1

*Significant, critical 'r' value 0.13

The coefficient correlation value between sports performance and the selected motor-sensory dimensions variable and the inter-correlations matrix values presented in VI -Table

4.4 INTER-CORRELATION RESULTS

4.4.1 RESULTS OF SPORTS PERFORMANCE

TABLE -VII

CORRELATION VALUE OF SPORTS PERFORMANCE WITH MOTOR- SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1	Sports Performance with Strength Endurance	0.98*
2	Sports Performance with Eye-Hand Coordination	0.89*
3	Sports Performance with Reaction Time	0.93*
4	Sports Performance with Oxygen Saturation	0.92*
5	Sports Performance with Pulse Rate	0.87*
6	Sports Performance with Motivation	0.97*
7	Sports Performance with Confidence	0.97*
8	Sports Performance with Anxiety Control	0.98*
9	Mental Preparation	0.99*
10	Sports Performance with Team Emphasis	0.98*
11	Sports Performance with Concentration	0.95*

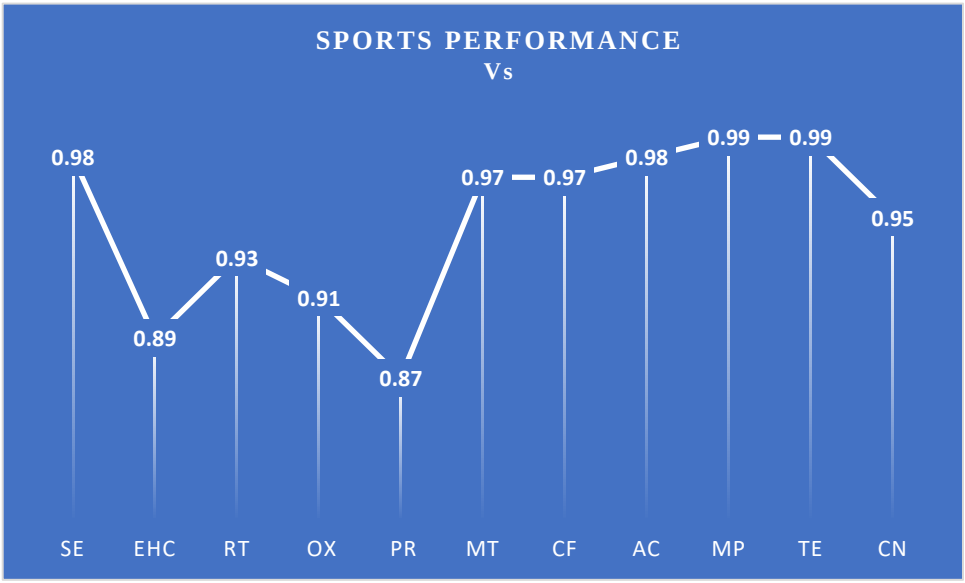
Critical 'r' value 0.13, * significant

In the above table VII the pairwise correlation (r) of sports performance with the selected motor-sensory dimensions variables such as strength endurance is 0.98 ($P \leq 0.05$), eye-hand coordination is 0.89 ($P \leq 0.05$), reaction time is 0.93 ($P \leq 0.05$), oxygen saturation is 0.92 ($P \leq 0.05$), Pulse rate is 0.87 ($P \leq 0.05$), motivation

is 0.97 (P ≤ 0.05), confidence is 0.97 (P ≤ 0.05), anxiety control is 0.98 (P ≤ 0.05), mental preparation is 0.99 (P ≤ 0.05), team emphasis is 0.98 (P ≤ 0.05), and concentration is 0.95 (P ≤ 0.05). Since, the obtained "r" values were the highest required "r" value 0.13 with "df" of 2 and 230 at a confidence level 0.05, the study result pointed to the existence of a strong relationship between sports performance and selected motor-sensory dimensions variables.

Figure 2

RELATIONSHIP BETWEEN SPORTS PERFORMANCE AND MOTOR- SENSORY DIMENSIONS VARIABLES



4.4.2 RESULTS OF STRENGTH ENDURANCE (SE)

TABLE -VIII

CORRELATION VALUE OF STRENGTH ENDURANCE (SE) WITH MOTOR- SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Eye-Hand Coordination	0.94*
2.	Reaction Time	0.96*
3.	Oxygen Saturation	0.95*
4.	Pulse Rate	0.92*
5.	Motivation	0.98*
6.	Confidence	0.99*
7.	Anxiety Control	0.99*
8.	Mental Preparation	0.98*
9.	Team Emphasis	0.98*
10.	Concentration	0.92*
11.	Sports Performance	0.98*

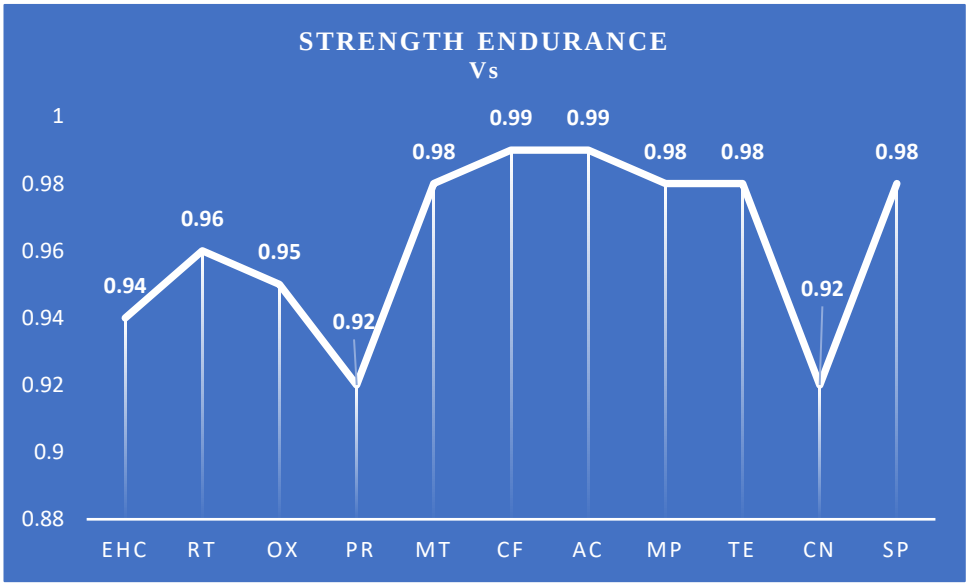
critical 'r' value 0.13, * significant

In the above table, VIII illustrates a significant correlation between strength endurance (SE) such as eye-hand coordination is 0.94 ($P \leq 0.05$), reaction time is 0.96 ($P \leq 0.05$), oxygen saturation is 0.95 ($P \leq 0.05$), pulse rate is 0.92 ($P \leq 0.05$), motivation is 0.98 ($P \leq 0.05$), confidence is 0.99 ($P \leq 0.05$), anxiety control is 0.99 ($P \leq 0.05$), mental preparation is 0.98 ($P \leq 0.05$), team emphasis is 0.98 ($P \leq 0.05$), and concentration is 0.92 ($P \leq 0.05$), Sports Performance = ($P \leq 0.05$). Since, the obtained "r" values pointed to the existence of a "r" value 0.13 with "df" 2 and 230

at confidence 0.05 level, the significant correlation values indicated that, the strong relationship between strength endurance (SE) and selected motor-sensory dimensions variables and sports performance.

Figure 3

RELATIONSHIP BETWEEN STRENGTH ENDURANCE (SE) WITH MOTOR-SENSORY DIMENSIONS VARIABLES



4.4.3 RESULTS OF EYE-HAND COORDINATION (EHC)

TABLE -IX

CORRELATION VALUE OF EYE-HAND (EHC) COORDINATION WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.94*
2.	Reaction Time	0.98*
3.	Oxygen Saturation	0.95*
4.	Pulse Rate	0.97*
5.	Motivation	0.97*
6.	Confidence	0.97*
7.	Anxiety Control	0.95*
8.	Mental Preparation	0.90*
9.	Team Emphasis	0.96*
10.	Concentration	0.84*
11.	Sports Performance	0.89*

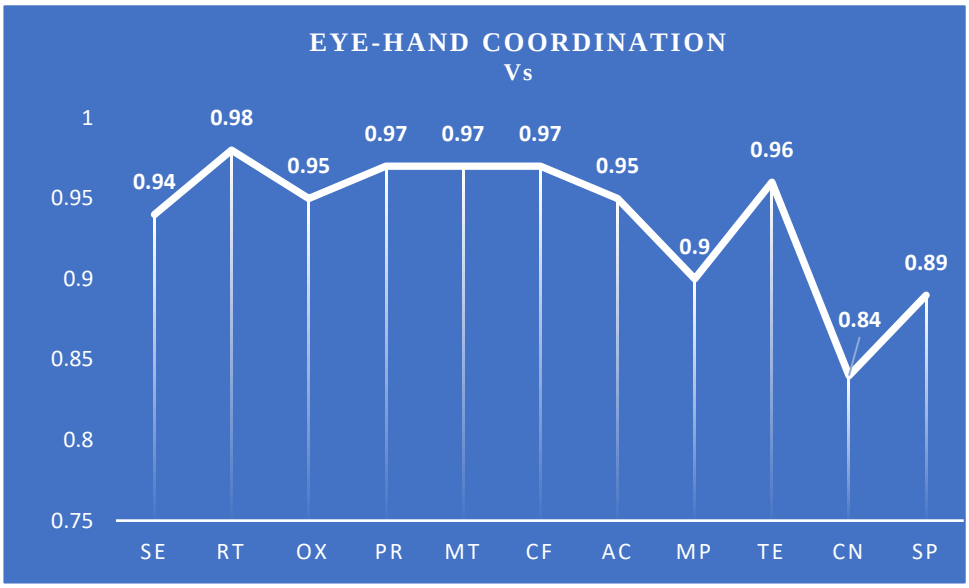
Critical 'r' value 0.13, * significant,

In the above table, IX illustrates that a correlation was significant between eye-hand coordination (EHC) such as strength endurance is 0.94 ($P \leq 0.05$), reaction time is 0.98 ($P \leq 0.05$), oxygen saturation is 0.95 ($P \leq 0.05$), pulse rate is 0.97 ($P \leq 0.05$), motivation is 0.97 ($P \leq 0.05$), confidence is 0.97 ($P \leq 0.05$), anxiety control is 0.95 ($P \leq 0.05$), mental preparation is 0.90 ($P \leq 0.05$), team emphasis is 0.96($P \leq 0.05$), concentration is 0.84 ($P \leq 0.05$), Sports Performance = 0.89 ($P \leq 0.05$). Since the obtained "r" values pointed to the existence of a "r" value 0.13 with

"df" of 2 and 230 at a confidence 0.05 level, it deduced a significant relationship between eye-hand coordination (EHC) and selected motor-sensory dimensions variables and sports performance.

Figure 4

RELATIONSHIP BETWEEN EYE-HAND (EHC) COORDINATION WITH MOTOR-SENSORY DIMENSIONS VARIABLE



4.4.4 RESULTS OF REACTION TIME (RT)

TABLE -X

CORRELATION VALUE OF REACTION TIME (RT) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.96*
2.	Eye-Hand Coordination	0.98*
3.	Oxygen Saturation	0.97*
4.	Pulse Rate	0.96*
5.	Motivation	0.98*
6.	Confidence	0.98*
7.	Anxiety Control	0.97*
8.	Mental Preparation	0.94*
9.	Team Emphasis	0.96*
10.	Concentration	0.90*
11.	Sports Performance	0.93*

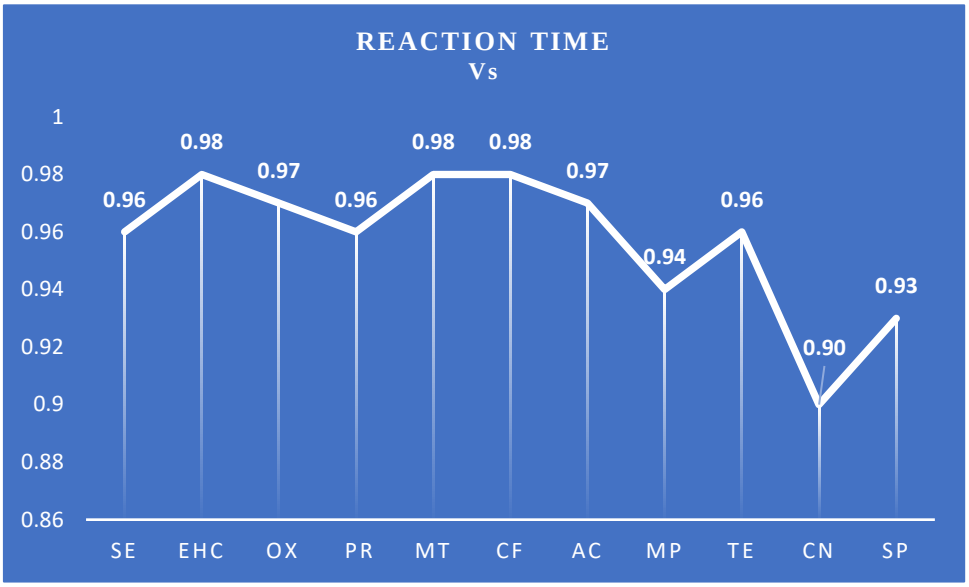
critical 'r' value 0.13, significant*,

In the above table, X illustrates that a correlation was significant between reaction time (RT) such as strength endurance is 0.96 ($P \leq 0.05$), eye-hand coordination is 0.98 ($P \leq 0.05$), oxygen saturation is 0.97 ($P \leq 0.05$), pulse rate is 0.96 ($P \leq 0.05$), motivation is 0.98 ($P \leq 0.05$) is confidence is 0.98 ($P \leq 0.05$), anxiety control is 0.97 ($P \leq 0.05$), mental preparation is 0.94 ($P \leq 0.05$), team emphasis is 0.96 ($P \leq 0.05$), concentration is 0.90 ($P \leq 0.05$), Sports Performance =

0.93 (P ≤ 0.05). Since, the obtained "r" values were greater than the required "r" value of 0.13 with "df" of 2 and 230 at 0.05 level of confidence, it was concluded that the significant correlation values indicate the relationship was strong between reaction time (RT) and selected motor-sensory variables dimension and sports performance.

Figure 5

RELATIONSHIP BETWEEN REACTION TAME (RT) WITH MOTOR-SENSORY VARIABLES



4.4.5 RESULTS OXYGEN SATURATION (OX)

TABLE -XI

CORRELATION VALUE OF OXYGEN SATURATION (OX) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.95*
2.	Eye-Hand Coordination	0.94*
3.	Reaction Time	0.97*
4.	Pulse Rate	0.94*
5.	Motivation	0.95*
6.	Confidence	0.94*
7.	Anxiety Control	0.94*
8.	Mental Preparation	0.91*
9.	Team Emphasis	0.93*
10.	Concentration	0.89*
11.	Sports Performance	0.92*

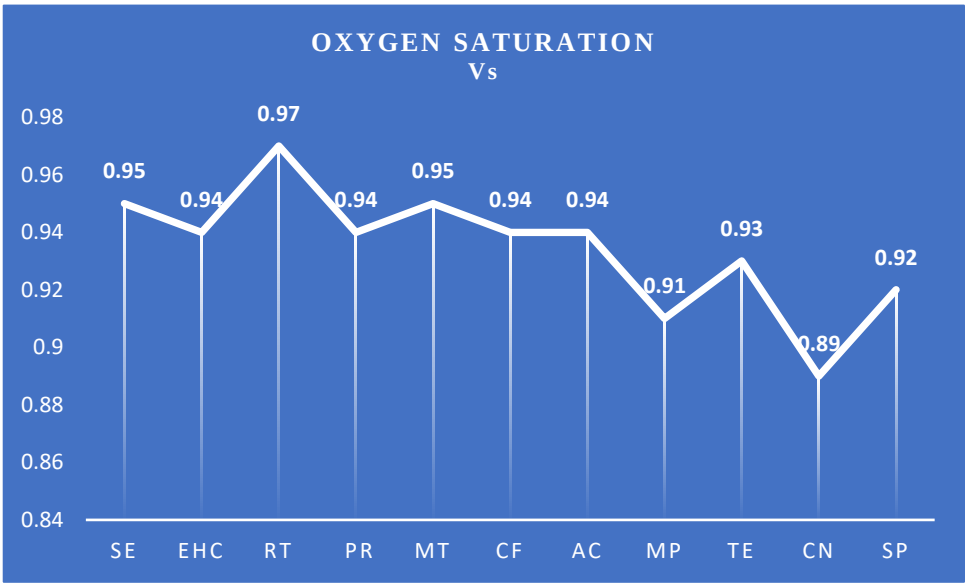
Critical 'r' value 0.13, * significant,

In the above table, XI illustrates that a correlation was significant between oxygen saturation (OX) such as strength endurance is 0.95 ($P \leq 0.05$), eye-hand coordination is 0.94 ($P \leq 0.05$), reaction time is 0.97 ($P \leq 0.05$), pulse rate is 0.94 ($P \leq 0.05$), motivation is 0.95 ($P \leq 0.05$), confidence is 0.94 ($P \leq 0.05$), anxiety control is 0.94 ($P \leq 0.05$), mental preparation is 0.91 ($P \leq 0.05$), team emphasis is 0.93 ($P \leq 0.05$), and concentration is 0.89 ($P \leq 0.05$), Sports Performance = 0.92($P \leq 0.05$). Since, the obtained "r" values were greater than the required "r" value

of 0.13 with “df” of 2 and 230 at 0.05 level of confidence, it deduced a significant relationship between oxygen saturation (OX) and selected motor-sensory dimensions variables and sports performance.

Figure 6

RELATIONSHIP BETWEEN OXYGEN SATURATION (OX) WITH MOTOR-SENSORY DIMENSIONS VARIABLES



4.4.6 RESULTS PULSE RATE (PR)

TABLE -XII

CORRELATION VALUE OF PULSE RATE (PR) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.92*
2.	Eye-Hand Coordination	0.97*
3.	Reaction Time	0.96*
4.	Oxygen Saturation	0.94*
5.	Motivation	0.95*
6.	Confidence	0.94*
7.	Anxiety Control	0.93*
8.	Mental Preparation	0.88*
9.	Team Emphasis	0.93*
10.	Concentration	0.83*
11.	Sports Performance	0.87*

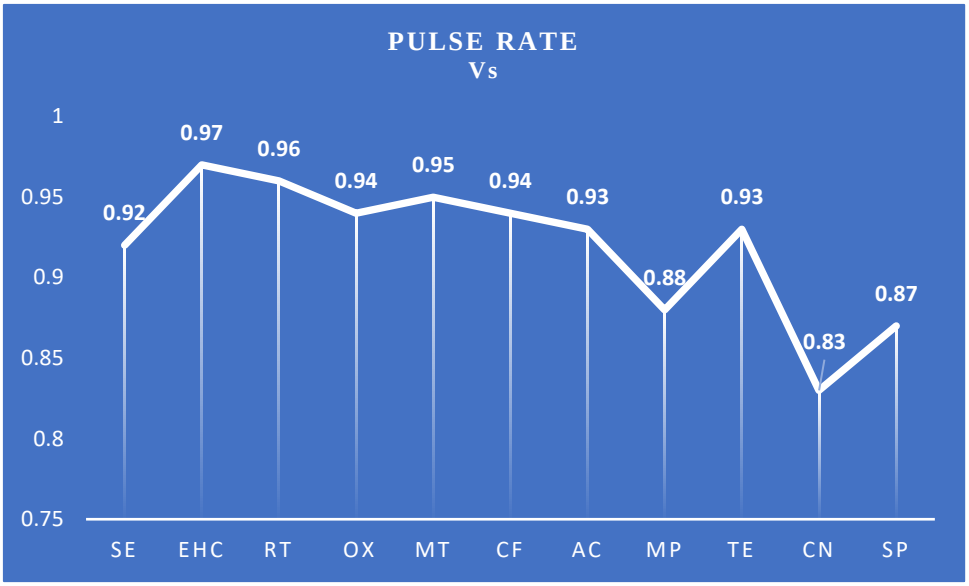
Critical 'r' value 0.13, * significant.

In the above table, XII illustrates that a correlation was significant between pulse rate (PR) such as strength endurance is 0.92 ($P \leq 0.05$), eye-hand coordination is 0.97 ($P \leq 0.05$), reaction time is 0.96 ($P \leq 0.05$), oxygen saturation is 0.94 ($P \leq 0.05$), motivation is 0.95 ($P \leq 0.05$), confidence is 0.94 ($P \leq 0.05$), anxiety control is 0.93 ($P \leq 0.05$), mental preparation is 0.88 ($P \leq 0.05$), team emphasis is 0.93 ($P \leq 0.05$), concentration is 0.83 ($P \leq 0.05$), Sports Performance = 0.87($P \leq 0.05$).

Since, the obtained "r" values were greater than the required "r" value of 0.13 with "df" of 2 and 230 at 0.05 level of confidence, it deduced a significant relationship between pulse rate (PR) and selected motor-sensory dimensions variables and sports performance.

Figure 7

RELATIONSHIP BETWEEN PULSE RATE (PR) WITH MOTOR-SENSORY DIMENSIONS VARIABLES



4.4.7 RESULTS OF MOTIVATION (MT)

TABLE - XIII

CORRELATION VALUE OF MOTIVATION (MT) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.98*
2.	Eye-Hand Coordination	0.97*
3.	Reaction Time	0.98*
4.	Oxygen Saturation	0.95*
5.	Pulse Rate	0.95*
6.	Confidence	0.99*
7.	Anxiety Control	0.99*
8.	Mental Preparation	0.97*
9.	Team Emphasis	0.99*
10.	Concentration	0.90*
11.	Sports Performance	0.97*

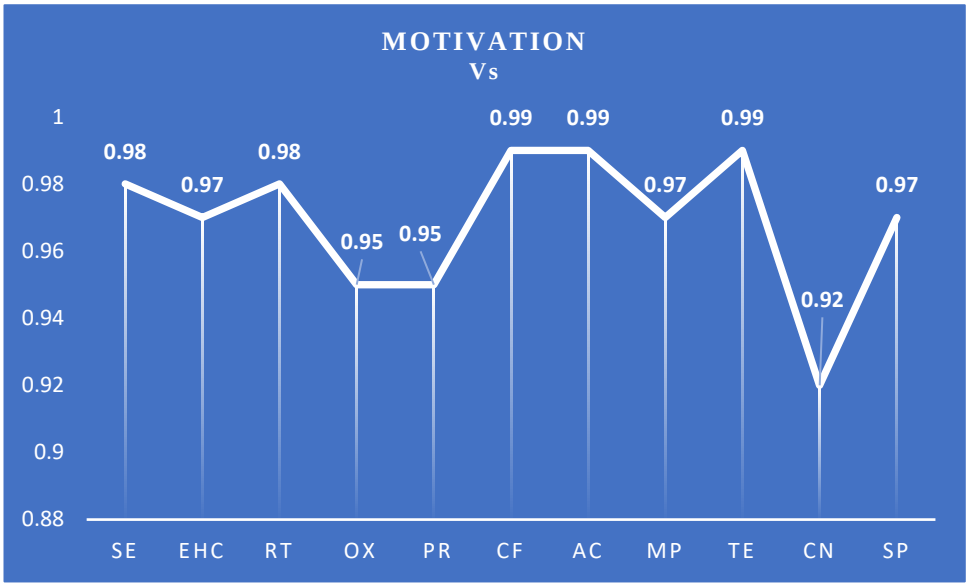
Critical 'r' value 0.13, * significant,

In the above table, XIII shows that the significant correlation between motivation (MT) such as strength endurance is 0.98 ($P \leq 0.05$), eye-hand coordination is 0.97 ($P \leq 0.05$), reaction time is 0.98 ($P \leq 0.05$), oxygen saturation is 0.95 ($P \leq 0.05$), pulse rate is 0.95 ($P \leq 0.05$), confidence is 0.99 ($P \leq 0.05$), anxiety control is 0.99 ($P \leq 0.05$), mental preparation is 0.97 ($P \leq 0.05$), team emphasis is 0.99 ($P \leq 0.05$), and concentration is 0.90 ($P \leq 0.05$), Sports Performance = 0.97

(P≤ 0.05). Since, the obtained "r" values were greater than the required "r" value of 0.13 with "df" of 2 and 230 at 0.05 level of confidence, it deduced a significant relationship between motivation (MT) and selected motor-sensory dimensions variables and sports performance.

Figure 8

RELATIONSHIP BETWEEN MOTIVATION WITH MOTOR-SENSORY DIMENSIONS VARIABLES



4.4.8 RESULTS OF CONFIDENCE (CF)

TABLE -XIV

CORRELATION VALUE OF CONFIDENCE (CF) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.99*
2.	Eye-Hand Coordination	0.97*
3.	Reaction Time	0.98*
4.	Oxygen Saturation	0.94*
5.	Pulse Rate	0.94*
6.	Motivation	0.99*
7.	Anxiety Control	0.99*
8.	Mental Preparation	0.97*
9.	Team Emphasis	0.99*
10.	Concentration	0.90*
11.	Sports Performance	0.97*

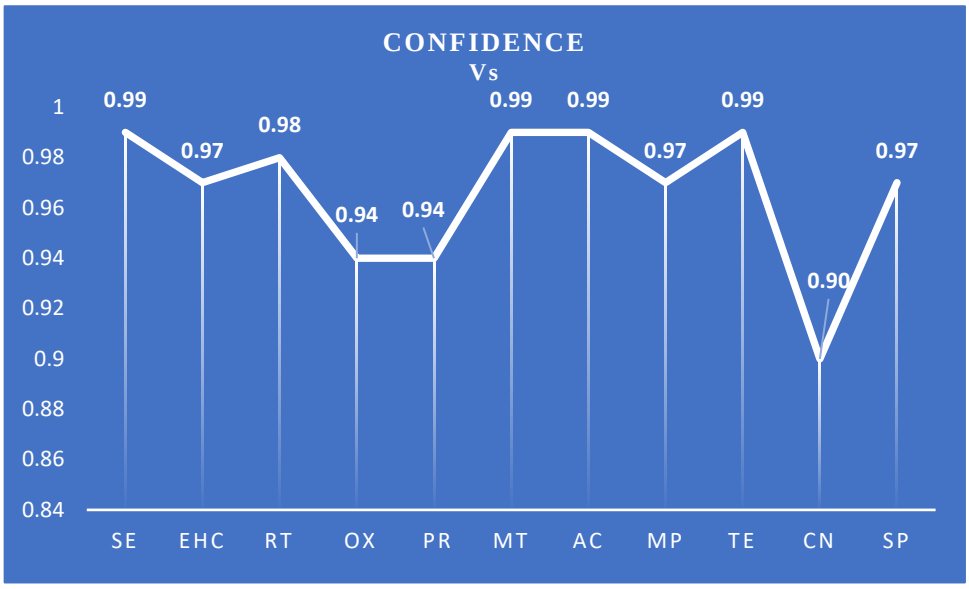
Critical 'r' value 0.13, * significant,

In the above table, XIV illustrates that a correlation was significant between confidence (CF) such as strength endurance is 0.99 ($P \leq 0.05$), eye-hand coordination is 0.97 ($P \leq 0.05$), reaction time is 0.98 ($P \leq 0.05$), oxygen saturation is 0.94 ($P \leq 0.05$), pulse rate is 0.94 ($P \leq 0.05$), motivation is 0.99 ($P \leq 0.05$), anxiety control is 0.99 ($P \leq 0.05$), mental preparation is 0.97 ($P \leq 0.05$), team emphasis is 0.99 ($P \leq 0.05$), concentration is 0.90 ($P \leq 0.05$), Sports Performance = 0.97 ($P \leq$

0.05). Since obtained values of "r" pointed to the existence of a "r" value of 0.13 with "df" of 2 and 230 at 0.05 level of confidence, it deduced a significant relationship between confidence (CF) and selected motor-sensory dimensions variables and sports performance.

Figure 9

RELATIONSHIP BETWEEN CONFIDENCE (CF) WITH MOTOR-SENSORY DIMENSIONS VARIABLES



4.4.9 RESULTS OF ANXIETY CONTROL (AC)

TABLE -XV

CORRELATION VALUE OF ANXIETY CONTROL (AC) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.99*
2.	Eye-Hand Coordination	0.95*
3.	Reaction Time	0.97*
4.	Oxygen Saturation	0.94*
5.	Pulse Rate	0.93*
6.	Motivation	0.99*
7.	Confidence	0.99*
8.	Mental Preparation	0.98*
9.	Team Emphasis	0.99*
10.	Concentration	0.93*
11.	Sports Performance	0.98*

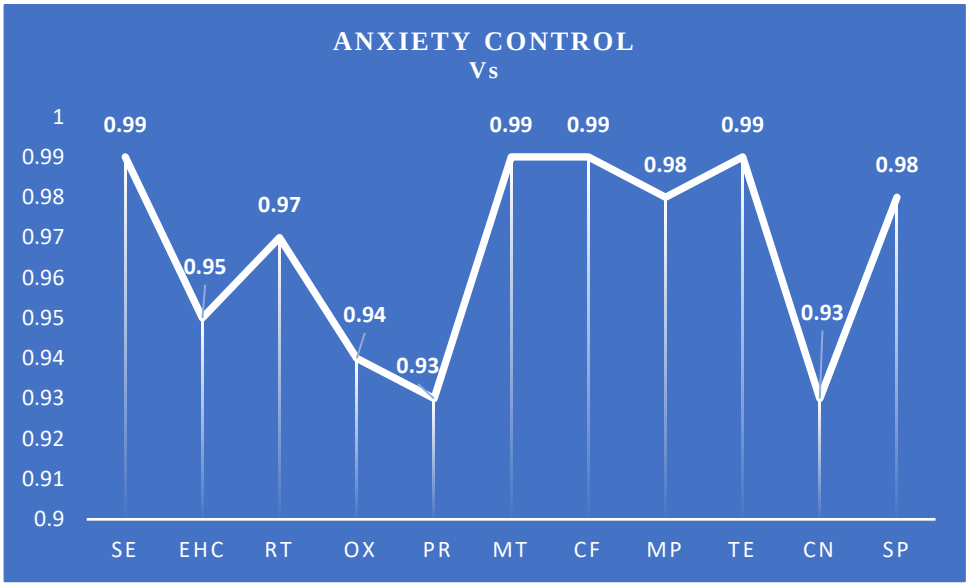
Critical 'r' value 0.13, * significant.

In the above table, XV indicated that the significant correlation between Anxiety Control (AC) such as strength endurance is 0.99 ($P \leq 0.05$), eye-hand coordination is 0.95 ($P \leq 0.05$), reaction time is 0.97 ($P \leq 0.05$), oxygen saturation is 0.94 ($P \leq 0.05$), pulse rate is 0.93 ($P \leq 0.05$), motivation is 0.99 ($P \leq 0.05$), confidence is 0.99 ($P \leq 0.05$), mental preparation is 0.98 ($P \leq 0.05$), team emphasis is 0.99 ($P \leq 0.05$), and concentration is 0.93 ($P \leq 0.05$), Sports Performance ($P \leq 0.05$). As the acquired "r" values pointed to the existence of a "r" value of 0.13

with “df” of 2 and 230 at 0.05 level of confidence, a significance was concluded that the relationship between anxiety control and selected motor dimensions variables and sports performance.

Figure 10

RELATIONSHIP BETWEEN ANXIETY CONTROL WITH MOTOR-SENSORY DIMENSIONS VARIABLES



4.4.10 RESULTS OF MENTAL PREPARATION (MP)

TABLE -XVI

CORRELATION VALUE OF MENTAL PREPARATION (MP) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.98*
2.	Eye-Hand Coordination	0.89*
3.	Reaction Time	0.94*
4.	Oxygen Saturation	0.91*
5.	Pulse Rate	0.88*
6.	Motivation	0.97*
7.	Confidence	0.97*
8.	Anxiety Control	0.98*
9.	Team Emphasis	0.98*
10.	Concentration	0.95*
11.	Sports Performance	0.99*

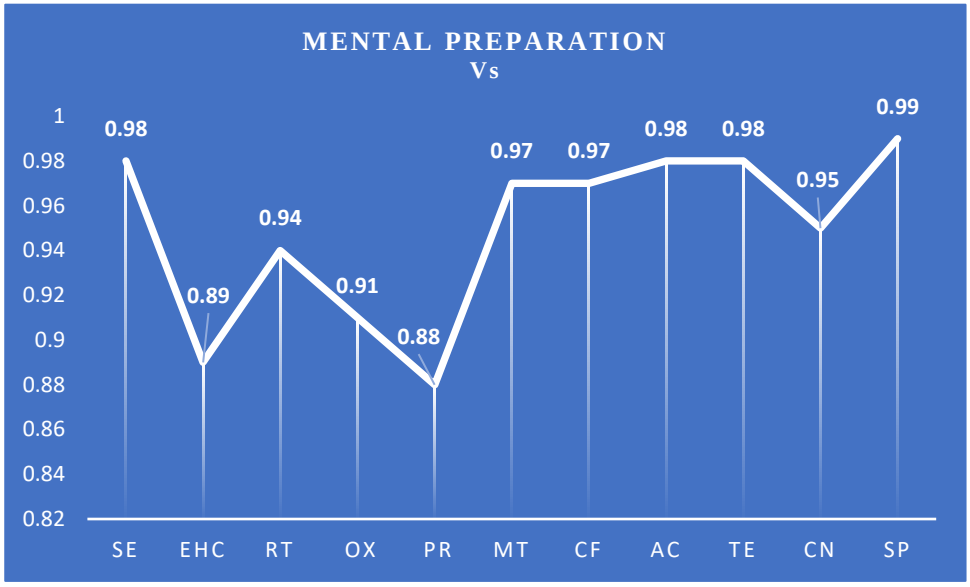
Critical 'r' value 0.13, * Significant.

In the above table, XVI indicated the significant correlation between mental preparation (MP) such as strength endurance is 0.98 ($P \leq 0.05$), eye-hand coordination is 0.89 ($P \leq 0.05$), reaction time is 0.94 ($P \leq 0.05$), oxygen saturation is 0.91 ($P \leq 0.05$), pulse rate is 0.88 ($P \leq 0.05$), motivation is 0.97 ($P \leq 0.05$), confidence is 0.97 ($P \leq 0.05$), anxiety control is 0.98 ($P \leq 0.05$), team emphasis is 0.98 ($P \leq 0.05$), and concentration is 0.95 ($P \leq 0.05$), Sports Performance = 0.99 ($P \leq 0.05$). As the acquired "r" values pointed to the existence of a "r" value of 0.13

with “df” of 2 and 230 at 0.05 level of confidence, a significance was concluded that the relationship between mental preparation (MP) and selected motor-sensory dimensions variables and sports performance.

Figure 11

RELATIONSHIP BETWEEN MENTAL PREPARATION (MP) WITH MOTOR-SENSORY DIMESIONS VARIABLES



4.4.11 RESULTS OF TEAM EMPHASIS (TE)

TABLE-XVII

CORRELATION VALUE OF TEAM EMPHASIS (TE) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

S.No	Variables	Obtained value
1.	Strength Endurance	0.98*
2.	Eye-Hand Coordination	0.96*
3.	Reaction Time	0.96*
4.	Oxygen Saturation	0.93*
5.	Pulse Rate	0.93*
6.	Motivation	0.99*
7.	Confidence	0.99*
8.	Anxiety Control	0.99*
9.	Mental Preparation	0.98*
10.	Concentration	0.91*
11.	Sports Performance	0.98*

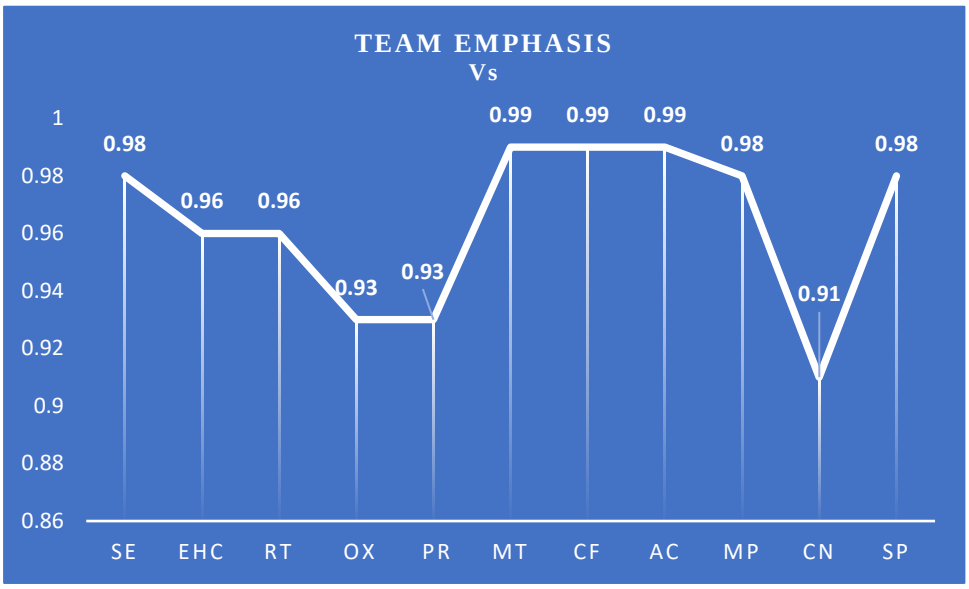
Critical 'r' value 0.13, * significant

In the above table, XVII views that significant correlation between team emphasis (TE) such as strength endurance is 0.98 ($P \leq 0.05$), eye-hand coordination is 0.96 ($P \leq 0.05$), reaction time is 0.96 ($P \leq 0.05$), oxygen saturation is 0.93 ($P \leq 0.05$), pulse rate is 0.93 ($P \leq 0.05$), motivation is 0.99 ($P \leq 0.05$), confidence is 0.99 ($P \leq 0.05$), anxiety control is 0.99 ($P \leq 0.05$), mental preparation is 0.98 ($P \leq 0.05$), and concentration is 0.91 ($P \leq 0.05$), Sports Performance = 0.98 ($P \leq 0.05$). since, the acquired "r" values pointed to the existence of an "r" value of 0.13 with "df" of

2 and 230 at 0.05 level of confidence, a significance was concluded that the relationship between team emphasis (TE) and selected motor-sensory dimensions variables and sports performance.

Figure 12

RELATIONSHIP BETWEEN TEAM EMPHASIS (TE) WITH MOTOR-SENSORY DIMENSIONS VARIABLES



4.4.12 RESULTS OF CONCENTRAATION (CN)

TABLE-XVIII

CORRELATION VALUE OF CONCENTRATION (CN) WITH MOTOR-SENSORY DIMENSIONS VARIABLES

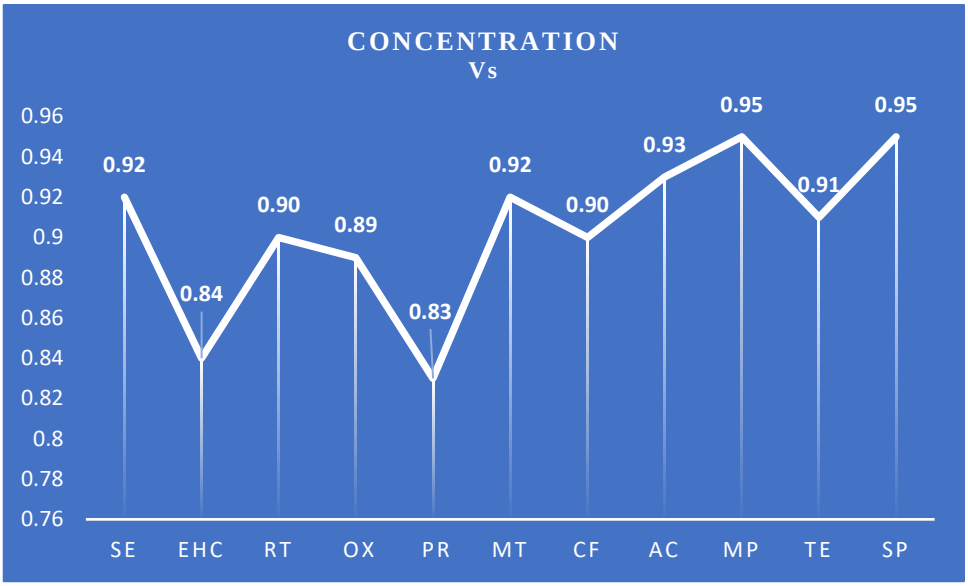
S.No	Variables	Obtained value
1.	Strength Endurance	0.92*
2.	Eye-Hand Coordination	0.90*
3.	Reaction Time	0.90*
4.	Oxygen Saturation	0.89*
5.	Pulse Rate	0.83*
6.	Motivation	0.92*
7.	Confidence	0.90*
8.	Anxiety Control	0.93*
9.	Mental Preparation	0.95*
10.	Team Emphasis	0.91*
11.	Sports Performance	0.95*

Critical 'r' value 0.13, * significant

In the above table, XVIII views the significant of correlation between concentration (CN) such as strength endurance is 0.92 ($P \leq 0.05$), eye-hand coordination is 0.90 ($P \leq 0.05$), reaction time is 0.90 ($P \leq 0.05$), oxygen saturation is 0.89 ($P \leq 0.05$), pulse rate is 0.83 ($P \leq 0.05$), motivation is 0.92 ($P \leq 0.05$), confidence is 0.90 ($P \leq 0.05$), anxiety control is 0.93 ($P \leq 0.05$), mental preparation is 0.95 ($P \leq 0.05$), and team emphasis is 0.91 ($P \leq 0.05$), Sports Performance = 0.95 ($P \leq 0.05$). Since, the obtained "r" values were greater than the required "r" value of 0.13 with "df" of 2 and 230 at 0.05 level of confidence, a significance was concluded in the relationship between concentration and selected motor-sensory dimensions variables and sports performance.

Figure 13

RELATIONSHIP BETWEEN CONCENTRATION (CN) WITH MOTOR -SENSORY DIMENSIONS VARIABLES



4.4.13 DISCUSSIONS ON FINDINGS

From tables V to XVII and related line graphs 2 to 13, it was evident that the selected motor-sensory dimensions variables had a strong relationship with sports performance, proving the need and importance of motor-sensory dimensions variables for better sports performance among persons with locomotor disabilities.

Further, it was evident from the above discussions that all the selected motor-sensory dimensions variables had a strong and high relationship with eachother, and proving the need and importance of each variable for sport performance was better among persons with locomotor disabilities.

Soylu, C., et,.al (2021) This study was aimed relationship between athletic performance and physiological characteristics in wheelchair basketball (WB) athletes with different classification scores. observed a strong correlation between athletic performance and shoulder IR and ER muscle strength, along with aerobic and anaerobic capacities across both categories. However, no statistical significance was detected between grip strength and athletic performance parameters in either category. The results indicate that the athletic performance in wheelchair basketball athletes with varying classification scores is influenced by upper

extremity muscle strength, along with aerobic and anaerobic capacities.

It is inferred from the review of the related literature and also from the tables V to XVIII and related line graphs 2 to 13 that, the results indicate that the selected motor-sensory variables had a strong relationship with sports performance. Hence, motor sensory variables are essential for sport performance were better among persons with locomotor disabilities which proves that the PWLDs (Persons with Locomotor Disabilities) who participated in sports had better motor performance compared non participate.

4.5 THE RESULTS OF STUDY -MSD VAR

4.6 MOTOR-SENSORY DIMENSIONS VARIABLES

4. 6.1 RESULTS OF MOTOR DIMENSION VARIABLE ON STRENGTH ENDURANCE (SE)

TABLE - XIX

DESCRIPTIVE STATISTICS ON STRENGTH ENDURANCE (SE)

Variable	subject	N	Mean	Standard Deviation (±)	Standard Error
Strength Endurance	**Paraplegia**	74	31.24	6.16	0.72
	Monoplegia	72	28.38	5.78	0.68
	Polio	86	27.70	5.31	0.57
	Total	232	29.04	5.92	0.39

In the above table, XIX highlights the descriptive values of strength endurance (SE) of persons with locomotor disabilities (PWLDs). Thus, the mean score and standard deviation (SD) of subjects were 31.24, 6.16 (Paraplegia), 28.38, 5.78 (Monoplegia), and 27.70, 5.31 (Polio).

TABLE – XX

COMPUTED OF ANOVA ON STRENGTH ENDURANCE (SE)

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Strength Endurance	1.75 (2, 229, 0.17)	Between Groups	546.02	2	273.01	8.29	0.00*
		Within Groups	7540.64	229	32.93		

*Significance at 0.05 level, df 2,229= 3.09

In the above table, XX the obtained 'f' value of 8.29 is greater than (≥) in the tabulated f value of 3.09 with 'df' 2 and 229. Hence a significant of difference was concluded among PWLDs (persons with locomotor disabilities) in strength endurance (SE). Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE – XXI

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON STRENGTH ENDURANCE (SE)

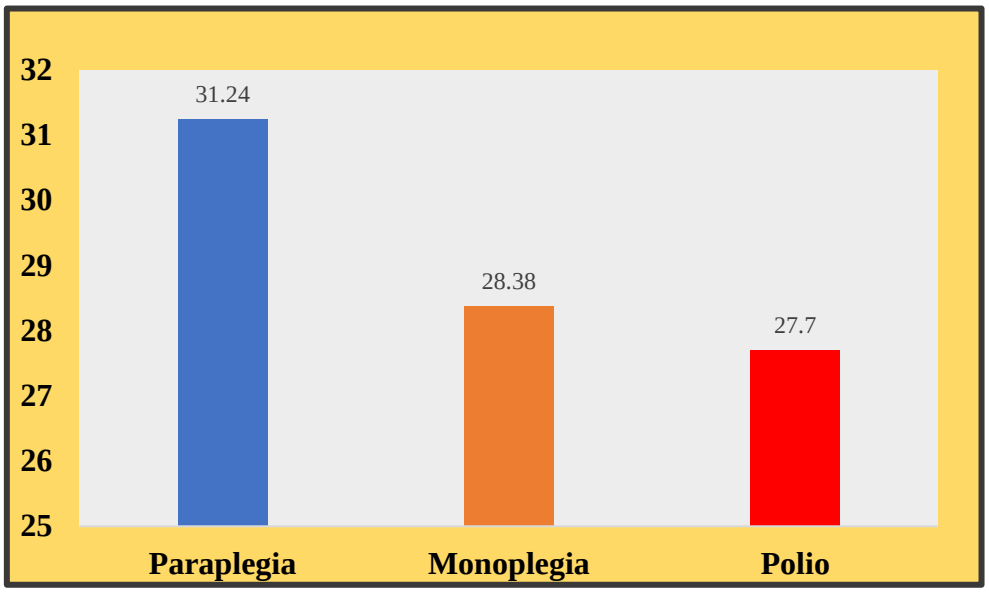
Paraplegia	Monoplegia	Polio	MD	Sig
31.24	28.38	-	2.87	0.01*
31.24	-	27.70	3.56	0.00*
-	28.38	27.70	0.68	1.00

*****Significance at 0.05 level

In the above table, XXI indicated the results of pairwise comparisons and the main effect of treatment. The results show a mean difference between Paraplegia and Monoplegia (2.87, $p<0.05$), Paraplegia and Polio (3.56, $p<0.05$) on strength endurance. The table also shows that the subjects belonging to Paraplegia were found to be higher than the subjects of monoplegia on strength endurance. Meanwhile, the mean difference between monoplegia and polio (0.68, $p>0.05$) was not considerable

Figure – 14

BONFERRONI-POST HOC TEST "MEANS OF STRENGTH ENDURANCE"



4.6.1.1 DISCUSSION ON THE FINDING OF STRENGTH ENDURANCE (SE)

Regarding strength endurance (SE), the subjects belonging to Paraplegia were found to have higher score than the subjects of monoplegia and polio. The subjects of monoplegia and polio was no statistical difference between strength endurance

The present study's finding was substantiated by findings derived by J A Haisma (2006) on Physical capacity in wheelchair-dependent persons with a spinal cord injury**.** The study assessed the level of physical capacity (peak oxygen up-take and peak power out-put, upper extremity of muscle strength, and respiratory function) in wheelchair-dependent persons with an SCI. In paraplegia, upper extremity of muscle strength and respiratory function were comparable present in the able-bodied population. In tetraplegia, muscle strength varied greatly, and respiratory function was reduced to 55–59% of the predicted values for an age-, gender- and height-matched able-bodied population. Physical capacity is reduced and varies in SCI.

It is inferred from the result of the present study and from the review of the above literature, the study was concluded that, strength endurance is crucial for monoplegia and polio peoples. Because it helps them to prevent muscle fatigue and maximize strength weakened muscles by the way it supports maintaining functional ability in day-to-day activities.

4.6.2 RESULTS OF SENSORY DIMENSION VARIABLE ON EYE-HAND COORDINATION (EHC)

TABLE - XXII

DESCRIPTIVE STATISTICS ON EYE-HAND COORDINATION (EHC)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Eye Hand Coordination	**Paraplegia**	74	11.55	2.21	0.26
	Monoplegia	72	12.07	2.75	0.32
	Polio	86	12.55	1.73	0.19
	Total	232	12.08	2.27	0.15

Table XXII highlights the descriptive values of eye-hand coordination (EHC) of persons with locomotor disabilities (PWLDs). The mean score and standard deviation (SD) of subjects were 11.55, 2.21 (Paraplegia), 12.07, 2.75 (Monoplegia), and 12.55, 1.73 (Polio).

TABLE – XXIII

COMPUTED ANOVA ON EYE-HAND COORDINATION (EHC)

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Eye Hand Coordination	22.62(2,229,0.00)	Between Groups	39.48	2	19.74	3.94	0.02*
		Within Groups	1147.667	229	5.012		

*Significance at 0.05 level, df 2,229= 3.09

Table XXIII shows that the obtained 'f' value of 3.94 is greater than the tabulated f value of 3.09 with 'df' 2 and 229. Hence a significant of difference was concluded among

individuals with locomotor disabilities on eye-hand coordination. Further, a pairwise comparison is needed using the Bonferroni method as shown below

TABLE – XXIV

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON EYE-HAND COORDINATION (EHC)

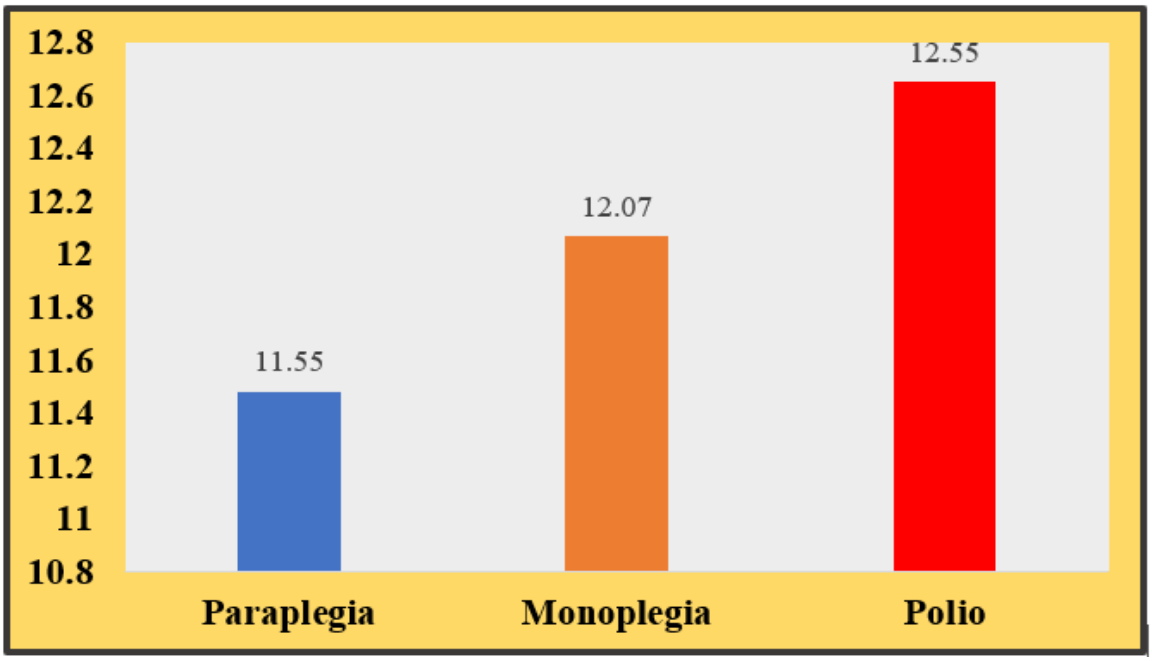
Paraplegia	Monoplegia	Polio	MD	Sig
11.55	12.07	-	0.52	0.50
11.55	-	12.55	0.99	0.02*
-	12.07	12.55	0.48	0.54

*Significance at 0.05 level

In the above table, XXIV indicated the results of pairwise comparisons and the main effect of treatment. The results show a mean difference between Paraplegia and polio (0.99, $p<0.05$) on eye-hand coordination. The table also shows that the subjects belonging to Paraplegia were found to be higher than the subjects of polio on eye-hand coordination. Meanwhile, the mean difference between Paraplegia and Monoplegia (0.52, $p>0.05$) and monoplegia and Polio (0.48, $p>0.05$) was not considerable.

Figure-15

BONFERRONI-POST HOC TEST "MEANS OF EYE-HAND COORDINATION"



4.6.2.1 DISCUSSION ON THE FINDING OF EYE-HAND COORDINATION (EHC)

Regarding eye-hand coordination, the subjects with paraplegia performed better than the subjects with polio, whereas compared to the performance of subjects with monoplegia, the subjects with paraplegia and monoplegia were found to be similar. Besides, the subjects with monoplegia and polio were also not found to have eye-hand coordination.

The present study's finding was substantiated by the findings driven by Patel, S. (2020) Motor Function and Eye-Hand Coordination in Individuals with Polio and Other Limb Disabilities. Findings show that individuals with polio exhibit unique motor deficits characterized by muscle weakness, asymmetrical limb function, and compensatory movement strategies. In contrast, individuals with other limb disabilities demonstrated varied coordination challenges depending on the nature and severity of their condition.

It is inferred from the result of the present study and also from the review of the related literature, it was concluded that, eye hand coordination is crucial skill for monoplegia and paraplegia patients, as it helps them with everyday task and improve their overall physical development and fine motor skills

4.6.3 RESULTS OF SENSORY DIMENSION VARIABLE ON REACTION TIME (RT)

TABLE - XXV

DESCRIPTIVE STATISTICS ON REACTION TIME (RT)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Reaction Time	**Paraplegia**	74	0.22	0.04	0.00
	Monoplegia	72	0.23	0.03	0.00
	Polio	86	0.24	0.03	0.00
	Total	232	0.24	0.03	0.00

In the above table, XXV highlights the descriptive values of the reaction time (RT) of persons with locomotor disabilities. Thus, the mean score and standard deviation (SD) of subjects are 0.23, 0.04 (Paraplegia) 0.23, 0.03 (Monoplegia), and 0.24, 0.03 (Polio).

TABLE – XXVI

COMPUTED OF ANOVA ON REACTION TIME

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Reaction Time	7.98(2,229 ,0.00)	Between Groups	0.02	2	0.01	7.59	0.00*
		Within Groups	0.26	229	0.00		

*Significance at 0.05 level, df 2,229= 3.09

Table XXVI shows that the obtained ‘f’ value of 7.59 is greater than the tabulated f value of 3.09 with ‘df’ 2 and 229. Hence a significant of difference was concluded among individuals with locomotor disabilities on reaction time. Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE – XXVII

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON REACTION TIME (RT)

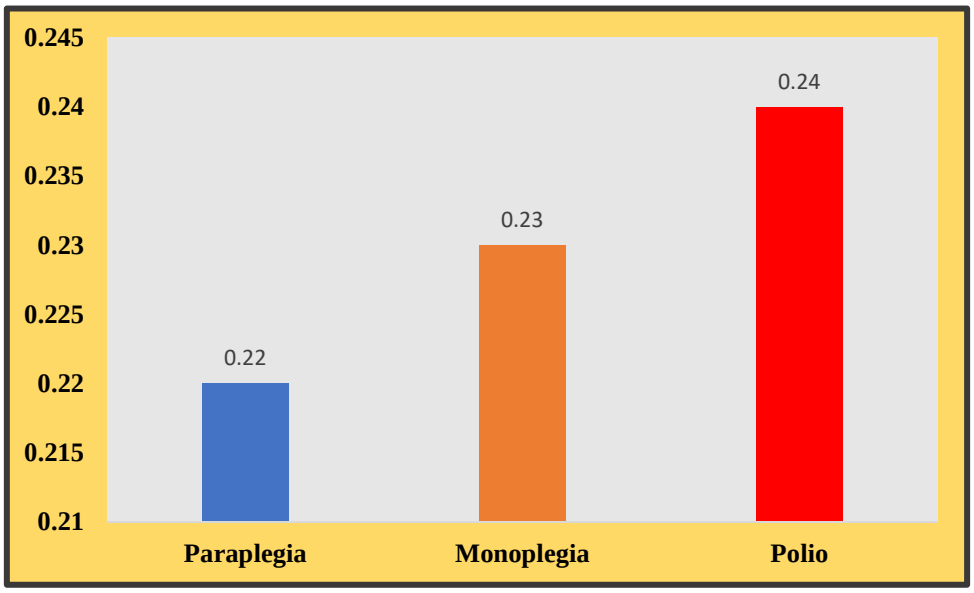
Paraplegia	Monoplegia	Polio	MD	Sig
0.22	0.23	-	0.01	0.70
0.22	-	0.24	0.02	0.00*
-	0.23	0.24	0.01	0.04*

*Significance at 0.05 level

In the above table, XXVII indicated the results of pairwise comparisons and the main effect of treatment. The results show the mean difference between Paraplegia and Polio (0.02, $p<0.05$) and monoplegia and Polio (0.01, $p<0.05$) was considerable. The table also shows that the subjects belonging to Paraplegia were found to be higher than the subjects of monoplegia and polio on reaction time. Meanwhile, the mean difference between Paraplegia and Monoplegia (0.01, $p>0.05$) was not considerable.

Figure-16

BONFERRONI-POST HOC TEST "MEANS OF REACTION TIME"



4.6.3.1 DISCUSSION ON THE FINDING OF REACTION TIME (RT)

The above said table and figure evidence was no significant difference exists between the subjects with paraplegia and monoplegia on reaction time. The study also shows that paraplegia better performed subjects with monoplegia and polio and Monoplegia subjects is also better than the subjects of polio on reaction time.

The present study's finding was substantiated by the findings driven by Smith, J. (2018). The study assessed reaction time and performance in adaptive athletes with limb disabilities. Findings indicate that reaction times vary significantly based on the type and level of limb disability. Athletes with unilateral lower-limb amputations exhibited slightly slower reaction times compared to their able-bodied counterparts, whereas upper-limb amputees showed compensatory adaptations in proprioception and muscle activation.

It is inferred from the study's results and findings from previous studies, it was concluded that, reaction time play a crucial role for monoplegia, paraplegia, and polio patients and it must be considered properly for the better sports performance. Because, they are struggling with quick and accurate movements, delayed movement times of the upper limb even if they are having injury in the upper back region.

4.6.4 RESULTS OF MOTOR DIMENSION VARIABLE ON OXYGEN SATURATION (OX)

TABLE - XXVIII

DESCRIPTIVE STATISTICS ON OXYGEN SATURATION

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Oxygen Saturation	**Paraplegia**	74	98.04	1.87	0.22
	Monoplegia	72	97.67	1.61	0.19
	Polio	86	97.94	1.68	0.18
	Total	232	97.87	1.72	0.11

In the above table, XXVIII highlights the descriptive values of oxygen saturation of persons with locomotor disabilities. Thus, the mean score and standard deviation (SD) of subjects were 98.04, 1.87 (Paraplegia), 97.67, 1.61 (Monoplegia), and 97.94, 1.68 (Polio).

TABLE – XXIX

COMPUTED OF ANOVA ON OXYGEN SATURATION (OX)

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Oxygen Saturation	**1.51(2,229 ,0.22)**	**Between Groups**	5.50	2	2.75	0.93	0.40
		Within Groups	679.59	229	2.97		

*Significance at 0.05 level df 2,229= 3.09

In the above table, XXIX shows that the obtained ‘f’ value of 0.93 is lesser than the tabulated ‘f’ value of 3.09 with ‘df’ 2 and 229. Hence no significant difference was concluded among persons with locomotor disabilities (PWLDs) on oxygen saturation (OX). Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE – XXX

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON OXYGEN SATURATION (OX)

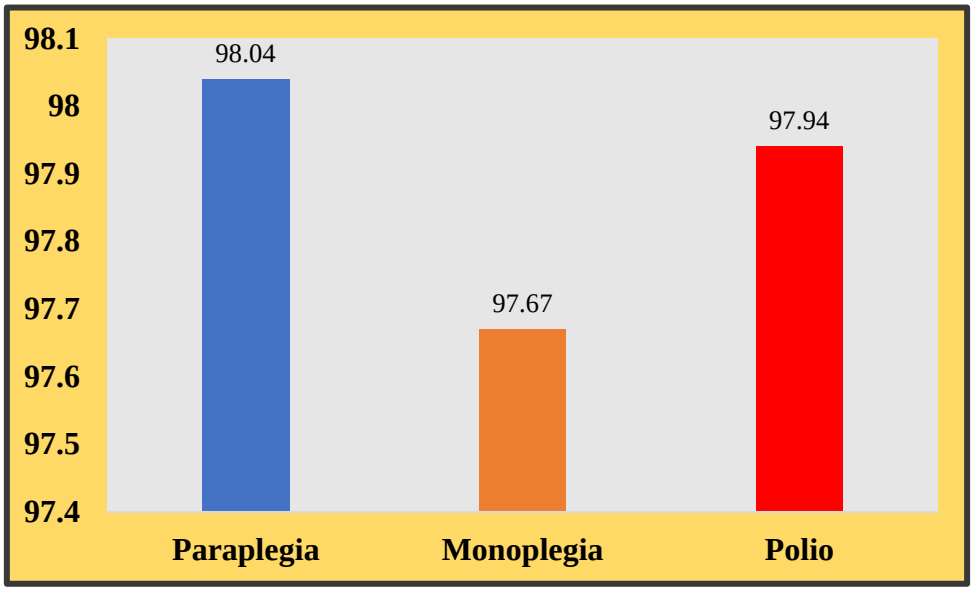
Paraplegia	Monoplegia	Polio	MD	Sig
98.04	97.67	-	0.37	0.57
98.04	-	97.94	0.10	1.00
-	97.67	97.94	0.28	0.96

*****Significance at 0.05 level

In the above table, XXX indicated the results of pairwise comparisons and the main effect of treatment. The results show the mean difference between Paraplegia and Monoplegia (0.37, p>0.05), Paraplegia and Polio (0.10, p>0.05), and Monoplegia and Polio (0.28, p>0.05) was not considerable.

Figure-17

BONFERRONI-POST HOC TEST "MEANS OF OXYGEN SATURATION"



4.6.4.1 DISCUSSION ON THE FINDING OF OXYGEN SATURATION (OX)

In analyze the oxygen saturation among the subjects of paraplegia, monoplegia, and polio, no statistically significant difference was noted over the status of oxygen saturation.

The present study's findings were substantiated by the findings driven by Sharma, P. (2019). The study assessed Oxygen Saturation and Physical Performance Metrics in Adaptive Athletes. The study analyzed how fluctuations in oxygen saturation during exertion impacted overall athletic performance and recovery times. Findings indicate that adaptive athletes with lower baseline oxygen saturation levels tend to experience faster fatigue, longer recovery times, and reduced endurance compared to those with optimal oxygen levels. Proper respiratory training, cardiovascular conditioning, and individualized fitness programs can help improve oxygen utilization and enhance overall athletic performance.

It is inferred from the result of the study and findings of the previous studies, it was concluded that, the patients of monoplegia, paraplegia and polio are suffered in respiratory failure. It leads to decreased whole body oxygen consumption. Hence, oxygen saturation should be considered properly for the above patients while assessing sports performance.

4.6.5 RESULTS OF MOTOR DIMENSION VARIABLE ON PULSE RATE (PR)

TABLE - XXXI

DESCRIPTIVE STATISTICS ON PULSE RATE (PR)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Pulse Rate	**Paraplegia**	74	96.47	1.11	0.13
	Monoplegia	72	97.51	1.20	0.14
	Polio	86	96.91	1.51	0.16
	Total	232	96.96	1.36	0.09

In the above table, XXXI highlights the descriptive values of the pulse rate of persons with locomotor disabilities. Thus, the mean and standard deviation of the subjects of terms were 96.47, 1.11 (Paraplegia), 97.51, 1.20 (Monoplegia), and 96.91, 1.51 (Polio).

TABLE – XXXII

COMPUTED OF ANOVA ON PULSE RATE

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
PULSE RATE	**11.60(2,229,0.00)**	**Between Groups**	39.88	2	19.94	11.84	0.00*
		Within Groups	385.69	229	1.68		

*Significance at 0.05 level, df 2,229= 3.09

Table XXXII shows that the obtained 'f' value of 11.84 is greater than the tabulated 'f' value of 3.09 with 'df' 2 and 229. Hence a significant difference was concluded among

individuals with locomotor disabilities on pulse rate. Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE – XXXIII

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON PULSE RATE

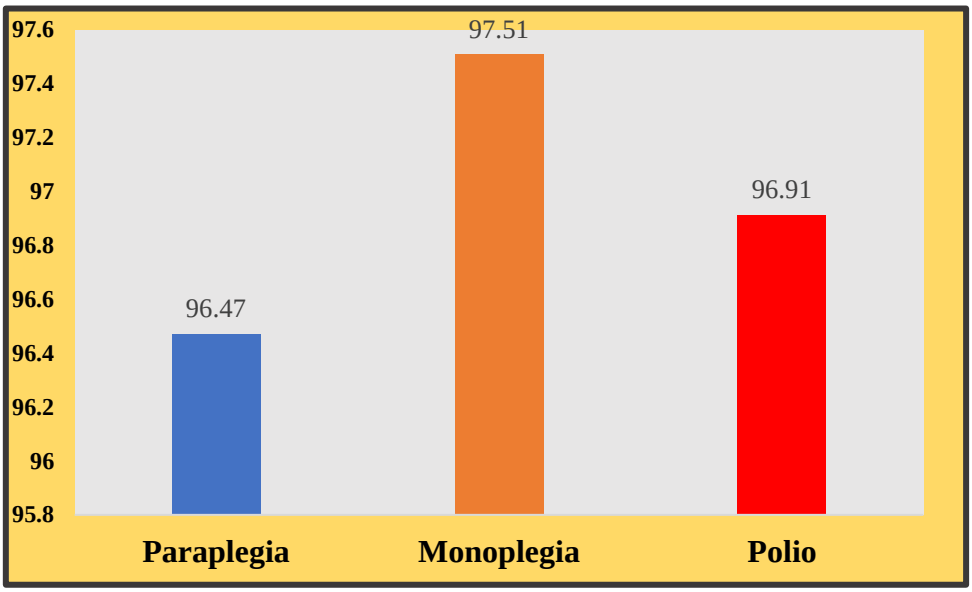
Paraplegia	Monoplegia	Polio	MD	Sig
96.47	97.51	-	1.04	0.00*
96.47	-	96.91	0.43	0.11
-	97.51	96.91	0.61	0.01*

*****Significance at 0.05 level

In the above table, XXXIII indicated the results of pairwise comparisons and the main effect of treatment. The results show the mean difference between Paraplegia and Monoplegia (1.04, $p<0.05$) and Monoplegia and Polio (0.61, $p<0.05$) on pulse rate. The table also shows that the subjects belonging to monoplegia were found to be higher than the subjects of Paraplegia and polio on pulse rate. the mean difference between Paraplegia and Polio (0.43, $p>0.05$) was not significant.

Figure-18

BONFERRONI-POST HOC TEST "MEANS OF PULSE RATE"



4.6.5.1 DISCUSSION ON THE FINDING OF PULSE RATE (PR)

A Significant difference was presented among the subjects of three groups namely paraplegia, monoplegia, and polio on pulse rate. from the post hoc results, the comparative results for the monoplegia subjects were PR higher than subjects with paraplegia and polio. Following this, the pulse rate didn't significantly discriminate between the subjects of paraplegia and polio.

The present study's findings were substantiated by the findings driven by E Mejia-Mejia (2020) Pulse rate variability in cardiovascular health review on its applications and relationship with heart rate variability. The study revealed that the connection between heart rate variability (HRV) and pulse rate variability (PRV) is still not completely understood. It also suggested that PRV may be affected not only by technical factors but also by physiological influences that could impact the accuracy of measurements taken from pulse-to-pulse time series derived from pulse waves. Therefore, PRV should not always be viewed as a reliable substitute for HRV, and it's important to exercise caution when using PRV in place of HRV.

It is inferred from the result of the study and also according to the conclusions of the previous study, it was concluded pulse rate play a vital role of person with locomotor disability. Because cardiovascular risk factors in the post locomotor syndrome have found a high prevalence of hypertension and stroke.

4.6.6 RESULTS OF SENSORY DIMENSION VARIABLE ON MOTIVATION (MT)

TABLE - XXXIV

DESCRIPTIVE STATISTICS ON MOTIVATION (MT)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Motivation	**Paraplegia**	74	28.78	7.05	0.82
	Monoplegia	72	27.82	5.41	0.64
	Polio	86	26.26	4.80	0.52
	Total	232	27.55	5.86	0.38

In the above table, XXXIV highlights the descriptive values of motivation of persons with locomotor disabilities. Thus, the mean and standard deviation of the subjects of terms are 28.78, 7.05 (Paraplegia), 27.82, 5.41 (Monoplegia), and 26.26, 4.80 (Polio).

TABLE – XXXV

COMPUTED OF ANOVA ON MOTIVATION

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Motivation	16.79(2,229,0.00)	**Between Groups**	261.91	2	130.96	3.91	0.02
		Within Groups	7661.57	229	33.46		

*Significance at 0.05 level, df 2,229= 3.09

In the above table, XXXV shows that the obtained 'f' value of 3.91 is greater than the tabulated 'f' value of 3.09 with 'df' 2 and 229. Hence a significant difference was concluded

among PWLDs on motivation (MT). Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE – XXXVI

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON MOTIVATION (MT)

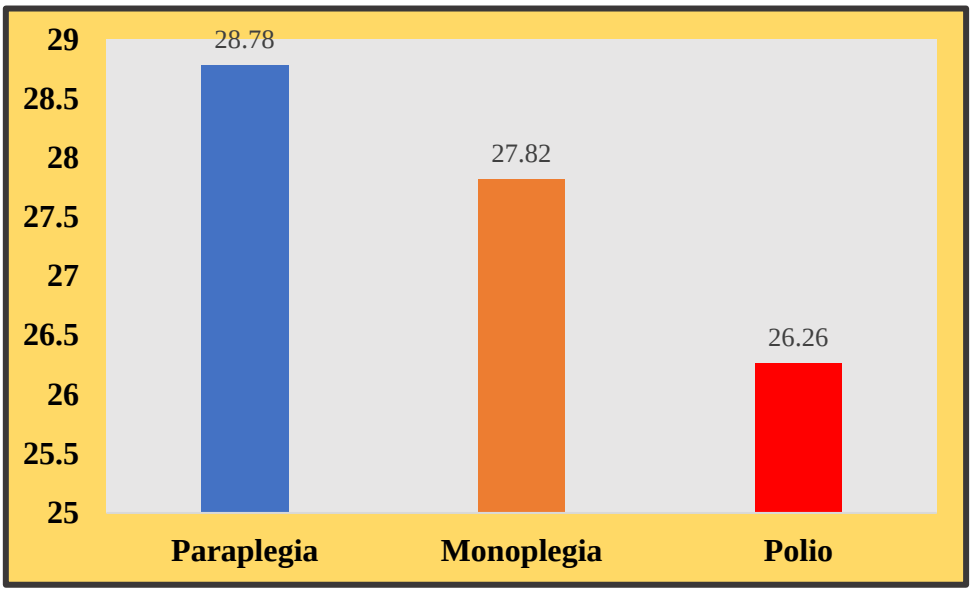
Paraplegia	Monoplegia	Polio	MD	Sig
28.78	27.82	-	0.96	0.95
28.78	-	26.26	2.53	0.02*
-	27.82	26.26	1.56	0.28

*****Significance at 0.05 level

In the above table, XXXVI results indicated of pairwise comparisons and the main effect of treatment. Show the mean difference result between Paraplegia and Polio (2.53, $p<0.05$) on motivation. The table also shows that the performance of the subjects with paraplegia on motivation was significantly outshined of the polio subjects. Meanwhile, the mean difference between Paraplegia and Monoplegia (0.96, $p>0.05$) and Monoplegia and Polio (1.56, $p>0.05$) was not considerable.

Figure-19

BONFERRONI- POST HOC TEST "MEANS OF MOTIVATION"



4.6.6.1 DISCUSSION ON THE FINDING OF MOTIVATION (MT)

The performance of the subjects with paraplegia on motivation was found to be significantly outshined of polio subjects. The motivation performance of paraplegia and monoplegia, subjects with monoplegia and polio, was not significant.

The present study's findings were substantiated by the findings driven by Kumar, R. (2018) Psychological Impacts of Post-Polio Syndrome: Rehabilitation and Motivation Strategies. The study highlights the dual impact of Post-Polio Syndrome on both psychological health, and physical, emphasizing the integrated rehabilitation initiative that addresses both aspects simultaneously. Psychological support, particularly through the use of motivation-enhancing strategies like goal-setting, social support, and self-efficacy training, plays an important role in helping survivors cope with the emotional and physical challenges of PPS.

It is inferred from the result of the study and findings of the previous studies, it was concluded that, for a person with locomotor disability motivation plays an important role in driving them to overcome physical limitations and participate actively in daily life.

4.6.7. RESULTS OF SENSORY DIMENSION VARIABLE ON CONFIDENCE (CF)

TABLE - XXXVII

DESCRIPTIVE STATISTICS ON CONFIDENCE (CF)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Confidence	**Paraplegia**	74	21.01	3.78	0.44
	Monoplegia	72	21.71	3.90	0.46
	Polio	86	23.23	5.22	0.56
	Total	232	22.05	4.49	0.29

In the above table, XXXVII highlights the descriptive values of confidence of persons with locomotor disabilities. Thus, the mean and standard deviation of the subjects were 21.01, 3.78 (Paraplegia), 21.71, 3.90 (Monoplegia), and 23.23, 5.22 (Polio).

TABLE –XXXVIII

COMPUTED OF ANOVA ON CONFIDENCE (CF)

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Confidence	19.16(2,229,0.00)	**Between Groups**	208.17	2	104.08	5.36	0.01*
		Within Groups	4443.210	229	19.403		

*Significance at 0.05 level, df 2,229= 3.09

In the above table, XXXVIII shows that the obtained 'f' value of 5.36 is greater than the tabulated 'f' value of 3.09 with 'df' 2 and 229. Hence a significant difference was concluded among persons with locomotor disabilities (PWLDs) on confidence. Further, a pairwise

comparison is needed using the Bonferroni method as shown below.

TABLE – XXXIX

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON CONFIDENCE

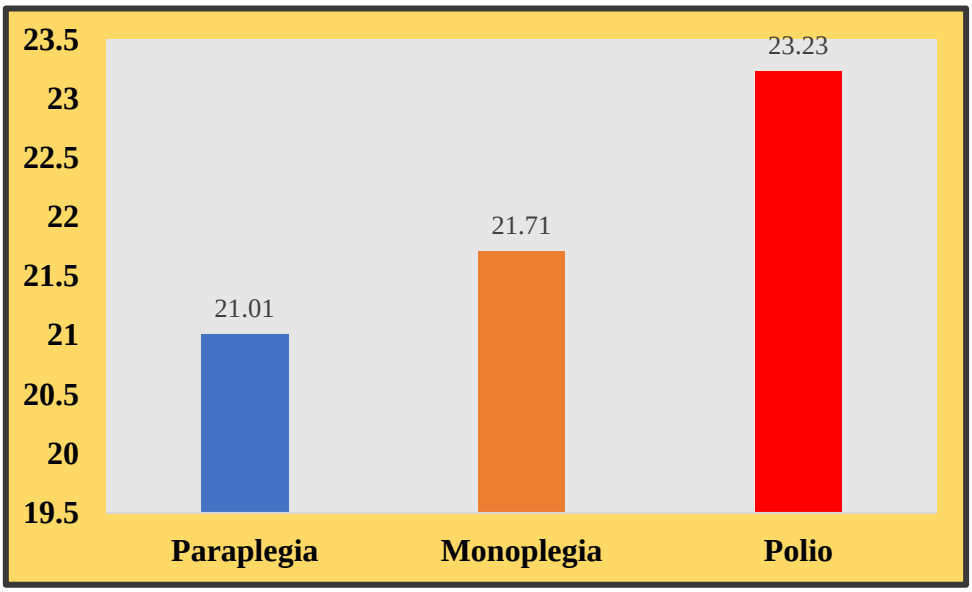
Paraplegia	Monoplegia	Polio	MD	Sig
21.01	21.71	-	0.69	1.00
21.01	-	23.23	2.21	0.01*
-	21.71	23.23	1.52	0.09

*****Significance at 0.05 level

In the above table, XXXIX indicated the results of pairwise comparisons and the main effect of treatment. The results show the mean difference between Paraplegia and Polio (0.69, $p<0.05$) on confidence. The table also shows that the subjects with polio on confidence were found to be significantly better than that of the subjects with paraplegia. Meanwhile, the mean difference between Paraplegia and Monoplegia (1.00, $p>0.05$) and Monoplegia and Polio (0.09, $p>0.05$) was not considerable.

Figure-20

BONFERRONI-POST HOC TEST "MEANS OF CONFIDENCE"



4.6.7.1 DISCUSSION ON THE FINDING OF CONFIDENCE (CF)

In analyzing the performance of confidence, the polio subject performed better than the paraplegic, whereas the performance of the subject with monoplegia and polio was found to be similar. Paraplegia and monoplegia were also found to be the same as for confidence.

The present study's findings were substantiated by the findings driven by According to research by Harris, R. G., & Smith, L. C. (2011) The Role of Physical Rehabilitation in Increasing Self-Efficacy and Confidence in Individuals with Monoplegia. The results show that physical rehabilitation significantly improved both self-efficacy and self-confidence in participants. Participants reported increased belief in their ability to perform daily tasks and improved confidence in engaging in social and physical activities. Also, the study found the individuals who participated as part of an extensive rehabilitation program that involved psychological support, showed greater improvements in mental health and physical functioning.

It is inferred from the result of the present study and findings of the previous study, it was concluded that, self-confidence plays crucial role in enabling them to overcome challenges embrace their abilities maintain the positive attitude.

4.6.8 RESULTS OF SENSORY DIMENSION VARIABLE ON ANXIETY CONTROL (AC)

TABLE - XL

DESCRIPTIVE STATISTICS ON ANXIETY CONTROL (AC)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Anxiety Control	**Paraplegia**	74	14.08	2.43	0.28
	Monoplegia	72	14.49	2.14	0.25
	Polio	86	15.27	2.81	0.30
	Total	232	14.65	2.53	0.17

In the above table, XL highlights the descriptive values of anxiety control of persons with locomotor disabilities. Thus, the mean and standard deviation of the subjects were 14.08, 2.43 (Paraplegia), 14.49, 2.14 (Monoplegia), and 15.27, 2.81 (Polio).

TABLE – XLI

COMPUTED OF ANOVA ON ANXIETY CONTROL (AC)

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Anxiety Control	8.33(2,229 ,0.00)	**Between Groups**	58.67	2	29.33	4.72	0.01*
		Within Groups	1424.35	229	6.22		

*Significance at 0.05 level, df 2,229= 3.09

In the above table, XLI shows that the obtained 'f' value of 4.72 is greater than the tabulated 'f' value of 3.09 with 'df' 2 and 229. Hence a significant difference was concluded

among individuals with locomotor disabilities in anxiety control. Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE – XLII

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON ANXIETY CONTROL (AC)

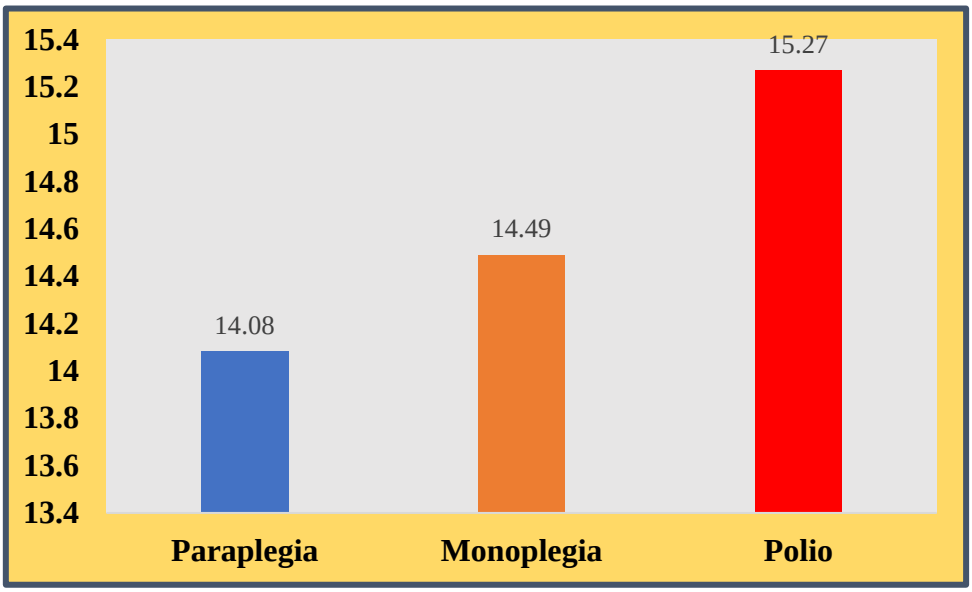
Paraplegia	Monoplegia	Polio	MD	Sig
14.08	14.49	-	0.40	0.98
14.08	-	15.27	1.19	0.01*
-	14.49	15.27	0.78	0.15

***Significance at 0.05 level

Table XLII indicates the results of pairwise comparisons and the main effect of treatment. The results show the mean difference between Paraplegia and Polio (1.19, $p<0.05$) on anxiety control. The table also shows that the subjects with polio on mental preparation were found to be significantly better than that of the subjects with paraplegia. Meanwhile, the mean difference between Paraplegia and Monoplegia (0.40, $p>0.05$), and Monoplegia and Polio (0.78, $p>0.05$) was not significant.

Figure-21

BONFERRONI-POST HOC TEST "MEANS OF ANXIETY CONTROL"



4.6.8.1 DISCUSSION ON THE FINDING OF ANXIETY CONTROL (AC)

In analyzing the performance of anxiety control, the performance of the subject with polio was better than the paraplegia, whereas compared to the performance of the subject pertain to the performance to monoplegia and polio were found to be similar. Besides, the subject pertains to paraplegia and monoplegia confirmed as equivalent to anxiety control.

The present study's findings were substantiated by the findings driven by Shetty, S., & Chandy, R. (2008) Psychological Impact of Post-Polio Syndrome: Anxiety and Coping Mechanisms in Survivors. The findings indicate that anxiety levels are significantly elevated in individuals with PPS, with many reporting heightened fears of worsening physical function, disability progression, and the potential for social isolation. This study highlights the significant psychological burden experienced by polio survivors with PPS, particularly in terms of anxiety related to functional decline.

It is inferred from the result of the study and previous findings, it was concluded that, managing anxiety control is an essential aspect of treatment for persons with locomotor disability. Because it improves overall quality of life by allow them to enhanced survive with the challenges of their physical ability.

4.6.9 RESULTS OF SENSORY DIMENSION VARIABLE ON MENTAL PREPARATION (MP)

TABLE - XLIII

DESCRIPTIVE STATISTICS ON MENTAL PREPARATION (MP)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Mental Preparation	**Paraplegia**	74	21.54	4.36	0.50
	Monoplegia	72	24.14	3.44	0.41
	Polio	86	22.42	3.85	0.42
	Total	232	22.67	4.03	0.26

In the above table, XLIII highlights the descriptive values of mental preparation of persons with locomotor disabilities. Thus, the mean and standard deviation of the subjects are 21.54, 4.36 (Paraplegia), 24.14, 3.44 (Monoplegia), and 22.42, 3.85 (Polio).

TABLE – XLIV

ANALYSIS OF VARIANCE ON MENTAL PREPARATION (MP)

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Mental Preparation	5.18(2,229 ,0.01)	**Between Groups**	255.18	2	127.59	8.37	0.00*
		Within Groups	3491.920	229	15.249		

*Significance at 0.05 level, df 2,229= 3.09

In the above table, XLIV obtained 'f' value of 8.37 is greater than (≥) the tabulated 'f' value of 3.09 with 'df' 2 and 229. Hence a significant difference was concluded among PWLDs

in mental preparation (MP). Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE – XLV

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON MENTAL PREPARATION (MP)

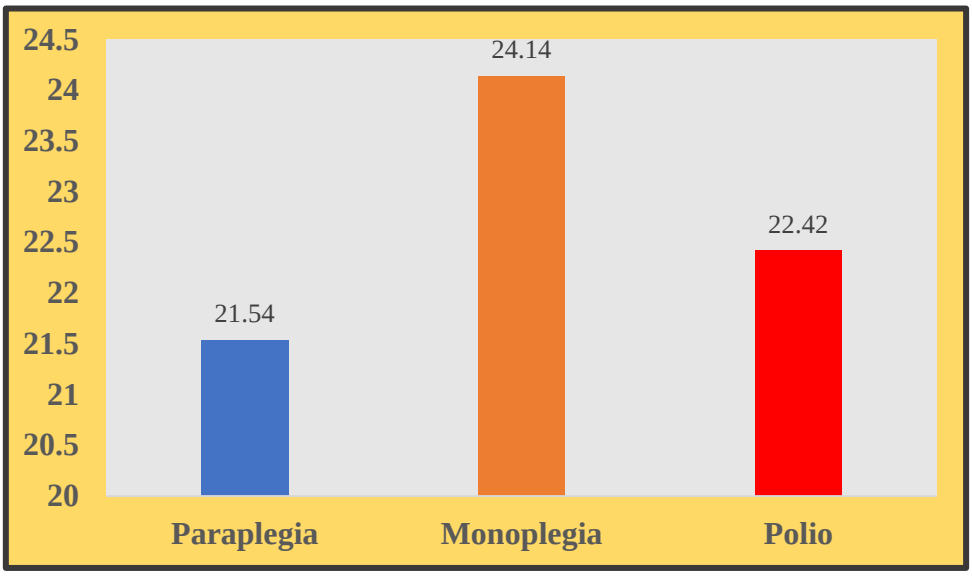
Paraplegia	Monoplegia	Polio	MD	Sig
21.54	24.14	-	2.60	0.00*
21.54	-	22.42	0.88	0.47
-	24.14	22.42	1.72	0.02*

***Significance at 0.05 level

In the above table, XLV indicated the results of pairwise comparisons and the main effect of treatment. The results show the mean difference between Paraplegia and Monoplegia (2.60, $p<0.05$) and Monoplegia and Polio (1.72, $p<0.05$) on mental preparation. The table also shows that the subjects with monoplegia on mental preparation performed better than the subjects with paraplegia and subjects with polio. Meanwhile, the mean difference between Paraplegia and Polio (0.88, $p>0.05$) was not considerable.

Figure-22

BONFERRONI-POST HOC TEST "MEANS OF MENTAL PREPARATION"



4.6.9.1 DISCUSSION ON THE FINDING OF MENTAL PREPARATION (MP)

Regarding mental preparation, the subject of monoplegia performed better than the subject of paraplegia and the subject of polio. Whereas compared mental preparation between the subjects of paraplegia and monoplegia and subjects with monoplegia and polio, a difference was found. Whereas compared mental preparation between the subject of paraplegia and polio, no difference was found.

The present study's findings were substantiated by the findings driven Saharuddin Ita (2022) Level of motivation self-confidence anxiety control mental preparation team cohesiveness and concentration of elite and non-elite athletes. The results reveal that elite athletes had a "very high" level of psychological skill with a "very high" level of motivation, "very high" self-confidence, "very high" anxiety control, "very high" mental preparation, "very high" team cohesiveness, and "very high" concentrations. While non-elite athletes have a "high" level of psychological skill with a "very high" level of motivation, "high" self-confidence, "high" anxiety control, "high" mental preparation, "high" team cohesiveness, and "high" concentration.

Evidence from the previous findings and the present study, it was concluded that impact of mental practice coordinates the lower limb and body movements of locomotor disabled persons. Hence it should be considered properly while treating locomotor disability.

4.6.10 RESULTS OF SENSORY DIMENSION VARIABLE ON TEAM EMPHASIS(TE)

TABLE -XLVI

DESCRIPTIVE STATISTICS ON TEAM EMPHASIS (TE)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Team Emphasis	**Paraplegia**	74	15.31	2.80	0.33
	Monoplegia	72	14.60	3.44	0.41
	Polio	86	15.13	2.50	0.27
	Total	232	15.02	2.92	0.19

In the above table, XLVI highlights the descriptive values of team emphasis of persons with locomotor disabilities. Thus, the mean and standard deviation of the subjects were 15.31, 2.80 (Paraplegia), 14.60, 3.44 (Monoplegia), and 15.13, 2.50 (Polio).

TABLE – XLVII

COMPUTED OF ANOVA ON TEAM EMPHASIS (TE)

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Team Emphasis	12.873(2,229,0.00)	**Between Groups**	20.13	2	10.06	1.19	0.31
		Within Groups	1942.764	229	8.484		

*Significance at 0.05 level, df 2,229= 3.09

In the above table XLVII shows that the obtained 'f' value of 1.19 is lesser than the

tabulated ‘f’ value of 3.09 with ‘df’ 2 and 229. Hence no significant difference was concluded among PWLDs in team emphasis (TE). Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE – XLVIII

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON TEAM EMPHASIS (TE)

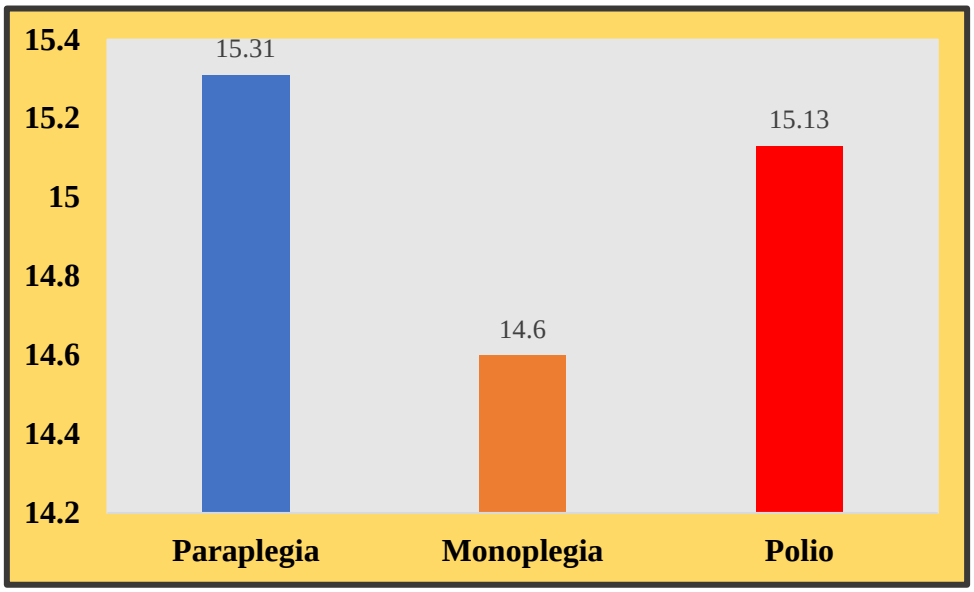
Paraplegia	Monoplegia	Polio	MD	Sig
15.31	14.60	-	0.71	0.42
15.31	-	15.13	0.18	1.00
-	14.60	15.13	0.53	0.77

*****Significance at 0.05 level

In the above table, XLVIII indicated the results of pairwise comparisons and the main effect of treatment. The results show the mean difference between Paraplegia and Monoplegia (0.71, p>0.05), Paraplegia and Polio (0.18, p>0.05), and Monoplegia and Polio (0.53, p>0.05) was not considerable in Team Emphasis.

Figure-23

BONFERRONI POST HOC TEST "MEANS TEAM EMPHASIS"



4.6.10.1 DISCUSSION ON THE FINDING OF TEAM EMPHASIS

In analyze the team emphasis among the subjects of paraplegia and monoplegia, subject of paraplegia and polio, and subject of monoplegia and polio, A statistically significant difference was identified over the performance of team emphasis.

The present study's findings were substantiated by the findings driven by Boris Milavic (2018) Development and factorial-validity of the Psychological Skills-Inventory for Sports, Youth Version– Short Form: The psychometric evaluation included Confirmatory Factor Analysis (CFA), an assessment of internal consistency using the Raykov's Maximal Reliability, and an analysis of correlations between the subscales. Additionally, Multivariate Analysis of Variance (MANOVA) was conducted to the examine statistical differences among the player categories from (male youth, male junior, female youth, and female junior) across all subscales. The CFA results supported the suitability of the proposed six first-order factor structure of the PSIS-Y-SF.

It is inferred from the result of the present study and the observation of the previous study, concluded that team emphasis is essential for locomotors disabled persons, because a team leader leads a team disability to deliver the quality of person-focused outcomes in line with others expectations.

4.6.11 RESULTS OF SENSORY DIMENSION VARIABLE ON CONCENTRATION (CN)

TABLE - XLIX

DESCRIPTIVE STATISTICS ON CONCENTRATION (CN)

Variable	Subject	N	Mean	Standard Deviation (±)	Standard Error
Concentration	**Paraplegia**	74	13.57	1.50	0.17
	Monoplegia	72	14.00	1.28	0.15
	Polio	86	13.34	1.34	0.14
	Total	232	13.62	1.40	0.09

In the above table, XLIX highlights the descriptive values of concentration (CN) of persons with locomotor disabilities (PWLDs). Thus, the score of mean and standard deviation (SD) of the subjects were 13.57, 1.50 (Paraplegia), 14.00, 1.28 (Monoplegia), and 13.34, 1.34 (Polio).

TABLE – L

ANALYSIS OF VARIANCE ON CONCENTRATION (CN)

Variable	Levene's Statistics	Source	SS	DF	MS	F	Sig
Concentration	1.40(2,229,0.25)	**Between Groups**	17.48	2	8.73	4.62	0.01*
		Within Groups	442.186	229	1.931		

*Significance at 0.05 level, df 2,229= 3.09

In the above table, L shows that the obtained ‘f’ value of 4.62 is greater than the tabulated ‘f’ value of 3.09 with ‘df’ 2 and 229. Hence a significant difference was concluded among PWLDs in concentration (CN). Further, a pairwise comparison is needed using the Bonferroni method as shown below.

TABLE– LI

BONFERRONI-POST HOC TEST FOR PAIRWISE COMPARISONS ON CONCENTRATION (CN)

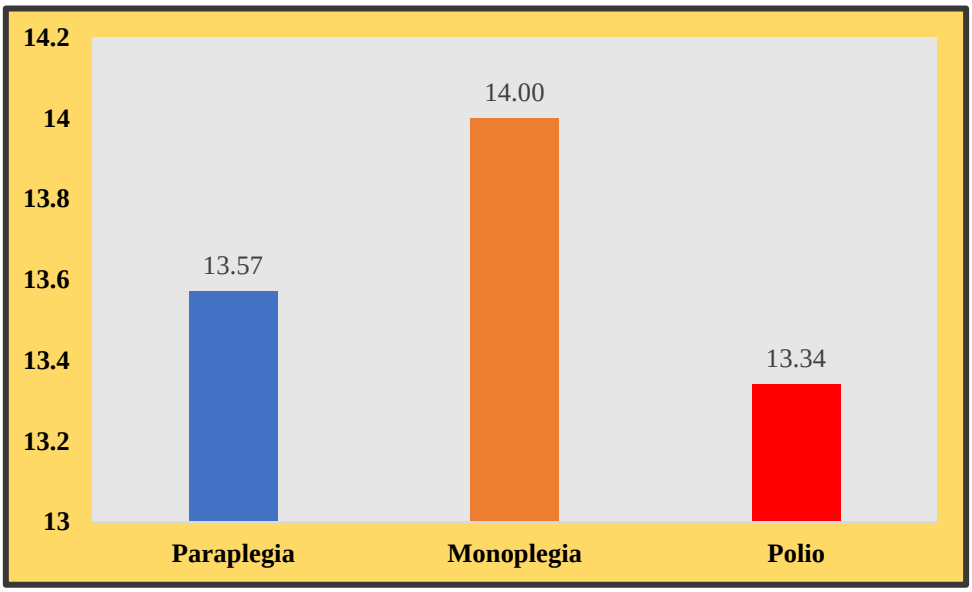
Paraplegia	Monoplegia	Polio	MD	Sig
13.57	14.00	-	0.43	0.18
13.57	-	13.34	0.23	0.88
-	14.00	13.34	0.66	0.01*

***Significance at 0.05 level

In the above table LI indicated the results of pairwise comparisons and the main effect of treatment. The results show the mean difference between monoplegia and Polio (0.66, $p<0.05$) in concentration. The table also shows that the performance on the concentration of monoplegia subjects was found to be higher than that of polio subjects. Meanwhile, the mean difference between Paraplegia and Monoplegia (0.43, $p>0.05$), Paraplegia and Polio (0.23, $p>0.05$) Was not considerable.

Figure-24

BONFERRONI-POST HOC TEST "MEANS OF CONCENTRATION"



4.6.11.1 DISCUSSION ON THE FINDING OF CONCENTRATION

The performance on the concentration of monoplegia subjects was recognized to be significantly higher than that of polio subjects, Besides, the performance of subjects of paraplegia and monoplegia subject of monoplegia and polio was no different.

The present study's findings were substantiated by the findings driven by Thompson, L. (2016) The Cognitive and Emotional Impact of Spinal Cord Injuries on Concentration and Rehabilitation Outcomes. Participants with higher levels of emotional distress showed significantly slower recovery rates and were less engaged in rehabilitation activities. Conversely, individuals who received integrated cognitive and emotional support, including cognitive rehabilitation and psychological counselling, demonstrated improved concentration, higher motivation, and better rehabilitation outcomes. This study highlights the crucial role of addressing both cognitive and emotional challenges in spinal cord injury rehabilitation.

It is inferred from the result of the present study and the previous study to be findings, there it remained concluded that concentration is essential for spinal cord injuries in disabled persons.

4.7 DISCUSSION ON- HYPOTHESES

1. The formulated first hypothesis that significant mean differences may exist among the subjects of paraplegia, monoplegia, and polio as selected motor dimensions variables, such as strength endurance (SE), oxygen saturation (OX), and pulse rate (PR).

The result was significant mean deference among the subjects of paraplegia, monoplegia, and polio as selected motor dimensions such as strength endurance (SE), and pulse rate (PR). Hence the first hypothesis was accepted for motor dimensions variables, such as strength endurance (SE) and pulse rate (PR), and the null-hypothesis was rejected.

There was no statistically significant difference was present among the subjects of paraplegia, monoplegia, and polio as selected motor dimensions variables, such as oxygen saturation (OX). the research hypothesis was rejected in this case and null-hypothesis was accepted for motor dimensions variable such as oxygen saturation (OX).

2. The second formulated hypothesis stated that significant mean differences may exist among the subjects of on paraplegia, monoplegia, and polio as selected sensory dimensions variables such as eye-hand coordination (EHC), reaction time (RT), motivation (MT), confidence (CF), team emphasis (TE), anxiety control (AC), mental preparation (MP), and concentration (CN).

The study was significant mean deference the subjects of paraplegia, monoplegia, and polio as selected sensory dimensions such as eye-hand coordination (EHC), reaction time (RT), motivation (MT), confidence (CF), mental preparation (MP), anxiety control (AC), and concentration (CN). Thus, the research hypothesis was accepted for sensory dimensions variables such as eye-hand coordination (EHC), reaction time (RT), motivation (MT), confidence (CF), anxiety control (AC), mental preparation (MP), and concentration (CN), the null- hypothesis was rejected.

There was no statistically significant difference was present among the subjects of paraplegia, monoplegia, and polio as selected sensory dimensions variables, such as team emphasis (TE). the second hypothesis was rejected in this case, the null- hypothesis was accepted for the sensory dimensions variable of team emphasis (TE)

3. Formulated the third hypothesis that there would be a significant relationship between sports performance, and the selected motor-sensory dimensions variables among persons with locomotor disabilities.

The study results showed that the relationship between sports performance and motor-sensory dimensions variables among the persons with locomotor disabilities (PWLDs) was highly significant.

4. The Fourth formulated hypothesized also that there would be a significant relationship within the selected motor-sensory dimensions variables among person with locomotor disabilities.

results of the study also, that there was a highly significant relationship within the selected motor-sensory dimensions among persons with locomotor disabilities.