**Table**

Table 1: Descriptive data for the ten participants

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Participants** | **Level of injury** | **Etiology** | **Cushion** | **Age (years)** | **Gender** | **height (m)** | **Weight**  **(kg)** | **BMI** |
| P1 | T10/T11 | Automobile accident | *Orthopedic Square cushion* | 34 | M | 1.83 | 69 | 20.6 |
| P2 | T8/10 | Automobile accident | *Roho ®Mosaic* | 38 | M | 1.79 | 70 | 21.85 |
| P3 | T12 | Automobile accident | *Flat foam* | 23 | F | 1.67 | 68 | 24.38 |
| P4 | T11 | Injury by a gun | *Roho® Mosaic* | 37 | M | 1.68 | 50 | 17.72 |
| P5 | T10 | Falling | *Flat foam* | 54 | F | 1.76 | 63 | 20.34 |
| T1 | C5 | Injury by a gun | *Quadro Select High Profile* | 49 | M | 1.93 | 70 | 18.79 |
| T2 | C5/C6 | Automobile accident | *Quadro Select High Profile* | 53 | M | 1.78 | 77 | 24.3 |
| T3 | C6/T1 | Diving | *Quadro Select High Profile* | 42 | F | 1.83 | 80 | 23.89 |
| T4 | C6 | Diving | *Flat foam* | 34 | M | 1.72 | 65 | 21.97 |
| T5 | C6/C7 | Automobile accident | *Quadro Select High Profile* | 44 | F | 1.7 | 75 | 25.95 |

P, paraplegic; T, tetraplegic; BMI, body mass index (kilograms/metres²); M, male, F, female.

Table 2- Phase 1 data of data collection

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Data Collection stage with flexion of hip and knees at 90 ° | | | | | | | | | | |
|  |  | Paraplegic | | | |  | Tetraplegic | | | | |
| Cushion |  | Mean Pressure (mmHg) | Peak Pressure (mmHg) | Contact Area (cm²) | PPI max (mmHg) |  | Mean Pressure (mmHg) | Peak Pressure (mmHg) | Contact Area (cm²) | PPI max (mmHg) | |
| *Roho Quadro Select HP* |  | 38.1±7.6\* | 166.7±58\*\* | 1370.9±277.3 | 111.7±28.5 |  | 42.7±8.5\* | 171.1±70.7 | 1332.1±357.4 | 110.7±59.9 | |
| *Jay Evolution Air* |  | 37.7±5.9\* | 174.5±69.3 | 1407±200.3 | 100.7±55.1 |  | 42.3±3.9\* | 232.6±23.2 | 1382.9±258.9 | 152.2±28.2 | |
| *Varilite Meridian Wave* |  | 39.2±8.3 | 194.2±63.6 | 1433.8±209.2 | 145.2±53.2 |  | 45.1±6.7 | 212.7±50.9 | 1409±252 | 167.8±44.4 | |
| Participant´s |  | 47.5±13.7 | 213.4±57.4 | 1162.2±268.8\*\*\* | 162.5±46 |  | 44±8.2 | 148.7±65.8 | 1139.6±436\*\*\* | 110.5±48.9\*\*\*\* | |
|  |  |  |  |  |  |  |  |  |  |  | |
| Data collection stage with Cross-legged | | | | | | | | | | |
| *Roho Quadro Select HP* |  | 45±12.6\* | 157.12±36.8\*\* | 1168±235.2 | 106.2±27.8\*\*\*\* |  | 50.3±11.2\* | 201.3±70.3 | 1138.3±282.6 | 156.4±76.5 | |
| *Jay Evolution Air* |  | 44.5±8.6\* | 195.8±56.2 | 1190±148.3 | 110.8±50.5 |  | 49.1±7.8\* | 249.4±14.7 | 1179±153 | 167.4±55.5 | |
| *Varilite Meridian Wave* |  | 46.1±11.9 | 225.5±41.6 | 1241.8±189.6 | 179.6±52.5 |  | 51.6±9.2 | 222.4±53.7 | 1237.4±177.1 | 178.4±52.9 | |
| Participant´s |  | 55.3±14 | 215.8±52.9 | 1001.5±212.7\*\*\* | 175.8±65 |  | 51.9±12.1 | 186.4±74 | 1001.9±350.9\*\*\* | 142.8±74.8\*\*\*\* | |
|  |  |  |  |  |  |  |  |  |  |  | |
| Data Collection steps with high feet support | | | | | | | | | | |
| *Roho Quadro Select HP* |  | 45.5±11.5\* | 190.6±55.3\*\* | 1099.9±230.5 | 139±44.9\*\*\*\* |  | 47.3±8.3\* | 131.6±61.8\*\* | 1139±327.7 | 142.2±88 | |
| *Jay Evolution Air* |  | 45.6±9.8\* | 198.6±62 | 1078.6±210.3 | 153±67.1 |  | 46.8±5.4\* | 251.8±4.9 | 1120.2±200.7 | 180.1±58.5 | |
| *Varilite Meridian Wave* |  | 48.1±13.4 | 235.4±26.7 | 1120.9±237.4 | 187.5 |  | 50.3±6.8 | 230.6±41.1 | 1173.8±260.2 | 192.3±37.9 | |
| Participant´s |  | 57.2±15.1 | 251.7±9.6 | 944.8±257.9\*\*\* | 191.5±51 |  | 51.1±10.6 | 176.9±68.1 | 988.9±381.6\*\*\* | 139.3±59.9\*\*\*\* | |

\*p=0.001, \*\*p=0.002, \*\*\*p=0.001, \*\*\*\*p=0.001

Table 3- Phase 2 Data of data collection

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Paraplegic | | | |  | Tetraplegic | | | |
| Cushion |  | Mean Pressure (mmHg) | Peak Pressure (mmHg) | Contact Area (cm²) | PPI max (mmHg) |  | Mean Pressure (mmHg) | Peak Pressure (mmHg) | Contact Area (cm²) | PPI max (mmHg) |
| *Roho Quadro Select HP* |  | 42.3±9.3\* | 193.8±69.9\*\* | 1366.7±235.1 | 124.9±47.1 |  | 47.8±7.6\* | 180.9±70.3 | 1339±339 | 148.5±83.7 |
| *Jay Evolution Air* |  | 41.3±6\* | 196.7±59.9 | 1403.3±206.3 | 108.9±37.7 |  | 44.8±20.9\* | 226±43.5 | 1416.4±161.7 | 158.2±60.4 |
| *Varilite Meridian Wave* |  | 42.7±8.6 | 197±69.4 | 1446.1±196.7 | 146.6±48.6 |  | 48.8±7 | 226±46.8 | 1444.5±175 | 167.8±50.5 |
| Participant´s |  | 51.4±12.6 | 228.3±40.8 | 1188±253.4\*\*\* | 184.5±49.5 |  | 49.2±9.1 | 162±52.44 | 1295.7±276\*\*\* | 116.9±43.5\*\*\*\* |

\*p=0.001, \*\*p=0.002, \*\*\*p=0.001, \*\*\*\*p=0.001