**6. TABLES AND FIGURES**

Table 1. Mean ± SD of anthropometric and sexual maturation data from the study group. TD: typically developing boys; H: Haemophiliac boys; BMI: body mass index; TSP; testicles, scrotum & penis; Composite Tanner stage: mean of TSP and hair Tanner scores; p value obtained from independent t-tests. † P value for Tanner scores obtained from Mann-Whitney tests.

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| --- | --- | --- | --- |
|  | TD (n= 14) | H (n = 14) | P value |
| Age (years) | 14.29 ± 2.13 | 14.29 ± 2.16 | 1.00 |
| Body Mass (kilogram) | 61.14 ± 17.74 | 56.86 ± 17.50 | 0.53 |
| Stature (meters) | 1.68 ± 0.16 | 1.65 ± 0.14 | 0.56 |
| BMI (kilogram/meters2) | 21.02 ± 3.13 | 20.43 ± 3.79 | 0.66 |
| TSP Tanner Stage† | 3.79 ± 1.12 | 3.86 ± 1.23 | 0.77 |
| Hair Tanner Stage† | 3.79 ± 1.19 | 3.86 ± 1.35 | 0.70 |
| Composite Tanner Stage† | 3.79 ± 1.12 | 3.86 ± 1.28 | 0.73 |

Table 2. Mean ± SD of absolute and normalised temporal spatial parameters of children with haemophilia (H) (n=14) and typically developing (TD) children (n = 14). p value obtained from independent t-tests.

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| Absolute temporal spatial parameters | TD | H | P value |
| Stride time (seconds) | 1.05 ± 0.07 | 1.03 ± 0.06 | 0.45 |
| Stride distance (meters) | 1.44 ± 0.10 | 1.41 ± 0.14 | 0.58 |
| Velocity (meters/second) | 1.40 ± 0.08 | 1.38 ± 0.09 | 0.65 |
| Cadence (steps/minute) | 115.02 ± 7.62 | 116.53 ± 8.41 | 0.62 |
| Stance phase (percent) | 58.95 ± 1.34 | 57.75 ± 1.37 | 0.03\* |
| Swing duration (percent) | 41.05 ± 1.34 | 42.25 ± 1.37 | 0.03\* |
| Single support (percent) | 41.17 ± 1.53 | 41.71 ± 1.38 | 0.34 |
| Initial double support (percent) | 8.75 ± 1.46 | 7.94 ± 1.05 | 0.10 |
| Terminal double support (percent) | 9.04 ± 1.33 | 8.10 ± 1.37 | 0.08 |
| Normalised temporal spatial parameters |  |  |  |
| Stride time | 0.35 ± 0.01 | 0.35 ± 0.01 | 1.00 |
| Stride distance | 1.59 ± 0.16 | 1.61 ± 0.11 | 0.70 |
| Velocity | 0.43 ± 0.03 | 0.41 ± 0.04 | 0.36 |
| Cadence | 34.89 ± 1.27 | 34.68 ± 1.34 | 0.72 |

\* p < 0.05.

Table 3. Principal components (PC) identified for sagittal plane joint kinematic waveform data for the hip, knee and ankle during level walking (n=28). TD: typically developing boys; H: Haemophiliac boys. p value obtained from independent t-tests. %: percentage. Positive PC factor scores indicate flexion and dorsiflexion motion; negative PC factor scores indicate extension and plantarflexion motion.

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| Joint kinematics | Number of principal components (% variance explained) | % of gait cycle | Principal component factor score | | P value |
|  | TD | H |  |
| Hip | Hip PC1 (81.0%) | 81 to 20 | 0.01 ± 0.91 | -0.01 ± 1.12 | 0.97 |
|  | Hip PC2 (11.7%) | 26 to 54 | -0.08 ± 0.86 | - 0.08 ± 1.14 | 0.67 |
|  | Hip PC3 (5.5%) | 58 to 71 | -0.15 ± 0.83 | 0.15 ± 1.16 | 0.48 |
| Knee | Knee PC1 (28.4%) | 17 to 39 | 0.01 ± 1.15 | -0.01 ± 0.86 | 0.97 |
|  | Knee PC2 (25.7%) | 67to 88 | 0.15 ± 0.95 | -0.15 ± 1.06 | 0.45 |
|  | Knee PC3 (19.8%) | 48 to 64 | -0.22 ± 0.79 | 0.22 ± 1.16 | 0.24 |
|  | Knee PC4 (19.5%) | 96 to 11 | -0.09 ± 1.18 | 0.09 ± 1.18 | 0.65 |
| Ankle | Ankle PC1 (26.9%) | 4 to 28 | - 0.29 ± 1.15 | 0.29 ± 0.75 | 0.13 |
|  | Ankle PC2 (26.3% | 31 to 58 | - 0.15 ± 0.91 | 0.15 ± 1.09 | 0.45 |
|  | Ankle PC3 (16.2%) | 70 to 82 | - 0.31 ± 0.92 | 0.31 ± 1.00 | 0.96 |
|  | Ankle PC4 (14.6%) | 91 to 1 | - 0.06 ± 1.17 | 0.06 ± 0.84 | 0.74 |
|  | Ankle PC5 (6.9%) | 61 to 65 | -0.20 ± 0.88 | 0.20 ± 1.10 | 0.29 |
|  | Ankle PC6 (5.1%) | 86 to 87 | 0.26 ± 0.91 | -0.26 ± 1.04 | 0.89 |

Table 4. Principal components (PC) identified for vertical ground reaction force (VGRF) and sagittal plane joint kinetic waveform data for the hip, knee and ankle during level walking (n=28). TD: typically developing boys; H: Haemophiliac boys. p value obtained from independent t-tests. %: percentage; VGRF: vertical ground reaction force. Positive PC factor scores indicate flexion and dorsiflexion moments; negative PC factor scores indicate extension and plantarflexion moments.

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| --- | --- | --- | --- | --- | --- |
| Joint kinetics | Number of principal components  (% variance explained) | % of gait cycle | Principal component factor score | | P value |
|  | TD | H |  |
| VGRF | VGRF PC1 (27.68%) | 28 to 36 | - 0.10 ± 1.11 | 0.10 ± 0.91 | 0.61 |
|  | VGRF PC2 (19.84%) | 12 to 20 | - 0.03 ± 0.66 | 0.03 ± 1.28 | 0.87 |
|  | VGRF PC3 (19.81%) | 40 to 48 | - 0.17 ± 0.95 | 0.17 ± 1.06 | 0.37 |
| Hip | Hip PC1 (25.6%) | 6 to 30 | -0.02 ± 0.85 | 0.02 ± 1.16 | 0.12 |
|  | Hip PC2 (25.4%) | 35 to 58 | 0.21 ± 0.97 | -0.21 ± 1.02 | 0.96 |
|  | Hip PC3 (11.3%) | 60 to 69 | -0.03 ± 1.09 | 0.03 ± 0.94 | 0.11 |
|  | Hip PC4 (9.9%) | 83 to 90 | 0.19 ± 0.99 | -0.19 ± 1.01 | 0.98 |
|  | Hip PC5 (7.7%) | 71 to 76 | 0.19 ± 1.11 | -0.19 ± 0.88 | 0.33 |
|  | Hip PC6 (5.7%) | 0 to 4 | 0.28 ± 1.16 | -0.28 ± 0.76 | 0.59 |
| Knee | Knee PC1 (28.6%) | 12 to 37 | 0.02 ± 1.04 | 0.24 ± 0.76 | 0.84 |
|  | Knee PC2 (16.9%) | 42 to 57 | 0.07 ± 1.03 | -0.07 ± 1.00 | 0.55 |
|  | Knee PC3 (13.8%) | 77 to 86 | -0.01 ± 1.21 | 0.01 ± 0.78 | 0.12 |
|  | Knee PC4 (12.4%) | 64 to 74 | -0.22 ± 1.13 | 0.22 ± 0.84 | 0.36 |
|  | Knee PC5 (8.0%) | 88 to 93 | 0.05 ± 1.15 | -0.05 ± 0.87 | 0.54 |
|  | Knee PC6 (6.9%) | 5 to 8 | 0.29 ± 0.68 | -0.29 ± 1.20 | 0.67 |
| Ankle | Ankle PC1 (18.9%) | 2 to 29 | 0.20 ± 0.09 | -0.20 ± 0.10 | 0.59 |
|  | Ankle PC2 (15.22%) | 48 to 62  67 to 72 | 0.20 ± 0.18 | -0.20 ± 0.26 | 0.04\* |
|  | Ankle PC3 (13.4%) | 33 to 45 | -0.34 ± 0.61 | 0.34 ± 0.17 | 0.35 |
|  | Ankle PC4 (12.7%) | 75 to 82 | 0.12 ± 0.60 | -0.12 ± 0.11 | 0.28 |
|  | Ankle PC5 (9.3%) | 86 to 91 | -0.22 ± 0.19 | 0.22 ± 0.17 | 0.67 |
|  | Ankle PC6 (5.7%) | 94 to 100 | -0.02 ± 0.27 | 0.02 ± 0.22 | 0.28 |

\* p < 0.05.