Kinematic technique for evaluation of athletic conditioning effects on equine degenerative suspensory ligament desmitis

The effect of patellar taping on lower limb joint movement and anterior knee pain

Plymouth community benefits from motion analysis

Evaluating the performance of a vision-based human motion capture system mounted on a humanoid robot

Specifically, in order to interact with people, the robot needs to be able to perform a wide range of communicative modalities and cues (Calinon, 2007). In this context, robotic systems should be able to understand and imitate human gestures and facial expressions. However, as a result of our investments and a range of our initiatives supported within the HMFL, patients can be assessed to provide the most novel and innovative ways to enhance the quality of life for people with disabilities. For example, patients with multiple sclerosis have been shown to benefit from robotic systems that can help them maintain and improve their motor function (Pascual-Leone et al., 2004). The University of Plymouth is committed to ensuring that people have access to the latest advances in technology and innovation, which can have a significant impact on the lives of disabled and elderly people.
The inrater reliability of a 3D motion analysis system for use as a measurement tool in FES evaluation studies

Table 1. Intra-rater reliability of a 3D motion analysis system for use as a measurement tool in FES evaluation studies. The table shows the mean, standard deviation, and 95% limits of agreement (LOA) for ankle angle at heel strike and toe-off, distance between the marked toe-off and next heel-strike of the left leg for ten of fifteen subjects (6-15) in the case of ankle angle data. Results are for subjects using a tripod. The table also shows the number of subjects evaluated for each parameter.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mean (degrees)</th>
<th>SD (degrees)</th>
<th>LOA (degrees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ankle angle at heel strike</td>
<td>13.93</td>
<td>3.58</td>
<td>2.46</td>
</tr>
<tr>
<td>Ankle angle at toe-off</td>
<td>2.83</td>
<td>0.76</td>
<td>0.64</td>
</tr>
</tbody>
</table>

Discussion

The intra-rater reliability of the CODA motion capture system has been shown to have test-retest variability that is comparable to well-established clinical gait analysis systems. Several potential factors have been identified as contributing to the variability, including the variability in the distance from the robot cameras between 1.5 and 2.2 m, and the variability in the position of the subject. The experiment shows that the intra-rater variability is not significantly different for the same subject to be captured by the system.

References


The objectives of completing this thesis to reduce the variability of the CODA system for FES evaluation experiments and to improve the accuracy of the CODA system. It is expected that the information gained from this study will be used to refine the CODA system for FES evaluation experiments. It is also expected that the information gained from this study will be used to refine the CODA system for FES evaluation experiments. It is also expected that the information gained from this study will be used to refine the CODA system for FES evaluation experiments.

References