Supplementary Information of: *Anticipation of wheelchair and rollerblade actions in spinal cord injured people, rollerbladers and physiotherapists*

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A. The Emotional Valence of the Stimuli

Materials and Methods

Participants
10 participants suffering from spinal cord injury (3 females, NLI range: C5-T12, AIS: 4 A, 4 B and 2 C) were recruited at the Spinal Unit of the Sacro Cuore Hospital (Negrar, Verona). In order to avoid any effects of familiarity with the videos, none of patients was previously tested in the Action Anticipation paradigm.

Stimuli
The stimuli were the 36 videos used in the Action Anticipation paradigm (see the main text).

Procedure
The participants were seated at a distance of about 60 cm from the screen. They observed in a random order all the 36 videos for their entire duration (3000 ms each one). After each video participants had to evaluate along four 0 (minimal) - 100 (maximal) VAS scales the degree of Anxiety, Unpleasantness (Negative emotions), Unexpectedness and Arousal (Neutral videos). The task lasted about 20 minutes.

Data handling and Statistical Analysis
The VAS score was the dependent variable, with Tool (Wheelchair, Rollerblades), Ending (Success, Safe, Fall) and Intensity of State (Negative, Neutral) as independent variables.

All the analyses were conducted following a Bayesian approach, similar to the one used for the Action Anticipation data (see below C). We computed the modes (Mo) and HPDIs for the \( \mu \) parameters of the \( \beta \) coefficients.

The mathematical description of the Hierarchical Bayesian Linear Model is reported in Table A.1 and the corresponding JAGS code (the script for the Bayesian analysis) is reported in Code A.1.

The comparisons (contrasts) among coefficients are reported on Table A.2

Estimation of the Coefficients via Hierarchical Bayesian Linear Model with non-informative prior

Table A.1: Hierarchical Bayesian Model for the non-informative prior for the Linear Model

| Formula | Rows in the JAGS code | Description |
|---------|------------------------|-------------|
| \( y \sim \text{Normal}(\mu, \sigma^2) \) | 4 | Likelihood |
| \( \mu = \alpha + \beta_v + \beta_t + \beta_{ve} + \beta_{vt} + \beta_{ve} + \beta_{vt} \alpha \sim \text{Normal}(0, \sigma^2_\alpha) \) | 6-8 | Linear model |
| \( \beta_v \sim \text{Normal}(0, \sigma^2_v) \) | 44 | Prior for \( \beta_v \) |
| \( \beta_t \sim \text{Normal}(0, \sigma^2_t) \) | 48 | Prior for \( \beta_t \) |
| \( \beta_{ve} \sim \text{Normal}(0, \sigma^2_{ve}) \) | 23 | Prior for \( \beta_{ve} \) |
| \( \beta_{vt} \sim \text{Normal}(0, \sigma^2_{vt}) \) | 29 | Prior for \( \beta_{vt} \) |
\[ \beta_{te} \sim \text{Normal}(0, \sigma^2_{\beta_{te}}) \] 35  
Prior for \( \beta_{te} \)

\[ \beta_{vte} \sim \text{Normal}(0, \sigma^2_{\beta_{vte}}) \] 16  
Prior for \( \beta_{vte} \)

\[ \beta_{s} \sim \text{Normal}(0, \sigma^2_{\beta_{s}}) \] 52  
Prior for \( \beta_{s} \)

\[ \sigma^2 \sim \text{Uniform}(0.001, 1000) \] 58–66  
Hyperprior. Prior for all the \( \sigma^2 \)

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**Code A.1:** JAGS code for the Hierarchical Bayesian Linear Model for the non-informative prior for the Emotional Valence of the Stimuli

```jags
model {  
  # Likelihood.
  for (i in 1:Ntotal) {  
    y[i] ~ dnorm(mu[i], 1/pow(sigma, 2))  
    mu[i] <- alpha + B_v[v[i]] + B_t[t[i]] + B_e[e[i]] +  
             B_vt[v[i], t[i]] + B_ve[v[i], e[i]] + B_te[t[i], e[i]] +  
             B_vte[v[i], t[i], e[i]] + B_s[subj[i]]
  }

  sigma ~ dunif(0.001, 1000)

  for (iv in 1:nvalence) {  
    for (it in 1:ntype) {  
      for (ie in 1:nending) {  
        B_vte[iv, it, ie] ~ dnorm(0.0, 1/pow(VTE_Sigma, 2))  
      }
    }
  }

  for (iv in 1:nvalence) {  
    for (ie in 1:nending) {  
      B_ve[iv, ie] ~ dnorm(0.0, 1/pow(VE_Sigma, 2))  
    }
  }

  for (it in 1:ntype) {  
    for (ie in 1:nending) {  
      B_vt[it, ie] ~ dnorm(0.0, 1/pow(VT_Sigma, 2))  
    }
  }

  for (ie in 1:nending) {  
    B_e[ie] ~ dnorm(0.0, 1/pow(ending_Sigma, 2))  
  }

  for (iv in 1:nvalence) {  
    B_v[iv] ~ dnorm(0.0, 1/pow(valence_Sigma, 2))  
  }

  for (it in 1:ntype) {  
    B_t[it] ~ dnorm(0.0, 1/pow(type_Sigma, 2))  
  }

  for (isubj in 1:nsubj) {  
    B_s[isubj] ~ dnorm(0.0, 1/pow(subj_Sigma, 2))  
  }

  alpha ~ dnorm(0.0, 1/pow(alpha_Sigma, 2))
}
```
## Hyperpriors

\[ \begin{align*}
\text{VTE}_\Sigma &\sim \text{dunif}(0.001, 1000) \\
\text{TE}_\Sigma &\sim \text{dunif}(0.001, 1000) \\
\text{VT}_\Sigma &\sim \text{dunif}(0.001, 1000) \\
\text{VE}_\Sigma &\sim \text{dunif}(0.001, 1000) \\
\text{valence}_\Sigma &\sim \text{dunif}(0.001, 1000) \\
\text{ending}_\Sigma &\sim \text{dunif}(0.001, 1000) \\
\text{type}_\Sigma &\sim \text{dunif}(0.001, 1000) \\
\text{subj}_\Sigma &\sim \text{dunif}(0.001, 1000) \\
\text{alpha}_\Sigma &\sim \text{dunif}(0.001, 1000)
\end{align*} \]

## Code for Sum-to-zero coefficients

```
...```

### Table A.2: Contrasts from the posterior distributions

The direct contrasts between posterior distributions are reported in each row. A contrast is the difference between two posterior distributions. For example, the “Rollerblade v Wheelchair” contrast is the posterior distribution of the difference between “Rollerblade” and “Wheelchair”.

Results are described by means of the Mode, the 89%HPDI, the ESS and the \( \hat{R} \) value. Contrasts whose HPDIs are completely greater than the ROPE are marked with “+” (i.e., the first term of the contrast is larger than the second term), conversely, they are marked with “-” (i.e., the second term of the contrast is larger than the first term). These are considered credible differences/contrasts. Contrasts that are not marked with a “+” or a “-” are considered non-credible.

In the table it is observable that only contrasts within main effects and the Emotion:Ending interaction are giving credible results.

As reported in the main text, these analyses show that Fall and Safe endings elicit more negative emotions (anxiety and unpleasantness) than Success endings, while neutral emotions (arousal and unexpectedness) are elicited more by Success endings than Safe and Fall endings. In addition, Wheelchair videos were related to higher negative evaluations than Rollerblades videos.

| Main Effects Contrasts | Mode   | HPDI  | ESS    | \( \hat{R} \) |
|------------------------|--------|-------|--------|--------------|
| Rollerblade v. Wheelchair | -3.199 | -4.428 | -1.904 | 120086.8     | 1  |
| Safe Fail v. Fall      | -6.963 | -8.392 | -5.300 | 125000.0     | 1  |
| Safe Fail v. Success   | 5.248  | 3.657  | 6.732  | 122421.6     | 1  |
| Fall v. Success        | 12.099 | 10.472 | 13.575 | 111245.7     | 1  |
| Negative v. Neutral    | -4.511 | -5.804 | -3.293 | 125000.0     | 1  |

| Emotion:Ending contrasts | Mode   | HPDI  | ESS    | \( \hat{R} \) |
|--------------------------|--------|-------|--------|--------------|
| Negative: Safe Fail v Fall | -0.891 | -2.414 | 0.594  | 125000.00    | 1  |
| Negative: Safe Fail v Success | 3.572  | 1.970  | 5.047  | 80587.34     | 1  |
| Negative: Fall v Success  | 4.349  | 2.872  | 5.998  | 66430.18     | 1  |
| Neutral: Safe Fail v Fall  | 0.891  | -0.594 | 2.414  | 125000.00    | 1  |
| Neutral: Safe Fail v Success | -3.572 | -5.047 | -1.970 | 80587.34     | 1  |
| Neutral: Fall v Success   | -4.349 | -5.998 | -2.872 | 66430.18     | 1  |
| Safe Fail: Negative v Neutral | 1.662  | -0.009 | 3.465  | 118276.68    | 1  |
| Fall: Negative v Neutral  | 3.569  | 1.754  | 5.281  | 87336.94     | 1  |
| Success: Negative v. Neutral | -5.249 | -7.134 | -3.521 | 6275.78 | 1 | - |
|-----------------------------|--------|--------|--------|---------|---|---|
| **Emotion: Tool Contrasts** |        |        |        |         |   |   |
| Negative: Wheelchair v. Rollerblades | 1.071 | -0.150 | 2.321 | 39802.35 | 1 |   |
| Neutral: Wheelchair v. Rollerblades | -1.071 | -2.321 | 0.150 | 39802.35 | 1 |   |
| Wheelchair: Negative v. Neutral | 1.071 | -0.150 | 2.321 | 39802.35 | 1 |   |
| Rollerblades: Negative v. Neutral | -1.071 | -2.321 | 0.150 | 39802.35 | 1 |   |
| **Valence: Tool Contrasts** |        |        |        |         |   |   |
| Safe Fail: Wheelchair v. Rollerblades | -1.233 | -2.943 | 0.375 | 22233.50 | 1 |   |
| Fall: Wheelchair v. Rollerblades | 1.450 | -0.154 | 3.304 | 16276.95 | 1 |   |
| Success: Wheelchair v. Rollerblades | -0.098 | -1.941 | 1.211 | 95962.82 | 1 |   |
| Wheelchair: Safe Fail v. Fall | -1.351 | -2.924 | 0.095 | 15549.53 | 1 |   |
| Wheelchair: Safe Fail v. Success | -0.315 | -1.840 | 0.908 | 64943.57 | 1 |   |
| Wheelchair: Fall v. Success | 0.766 | -0.401 | 2.438 | 27841.38 | 1 |   |
| Rollerblades: Safe Fail v. Fall | 1.351 | -0.095 | 2.924 | 15549.53 | 1 |   |
| Rollerblades: Safe Fail v. Success | 0.315 | -0.908 | 1.840 | 64943.57 | 1 |   |
| Rollerblades: Fall v. Success | -0.766 | -2.438 | 0.401 | 27841.38 | 1 |   |
| **Valence: Ending: Tool Contrasts** |        |        |        |         |   |   |
| Negative X Rollerblades X Safe Fail v. Wheelchair X Fall | -0.005 | -0.861 | 1.107 | 86238.59 | 1 |   |
| Negative X Rollerblades X Safe Fail v. Wheelchair X Fall | -0.001 | -0.991 | 0.955 | 125000.00 | 1 |   |
| Negative X Rollerblades X Safe Fail v. Wheelchair X Fall | 0.002 | -1.107 | 0.867 | 71300.34 | 1 |   |
| Negative X Rollerblades X Safe Fail v. Wheelchair X Fall | 0.005 | -1.107 | 0.861 | 86238.59 | 1 |   |
| Negative X Chair X Safe Fail v. Wheelchair X Fall | -0.001 | -0.955 | 0.991 | 125000.00 | 1 |   |
| Negative X Chair X Safe Fail v. Wheelchair X Fall | -0.002 | -0.867 | 1.107 | 71300.34 | 1 |   |
| Neutral X Rollerblades X Safe Fail v. Wheelchair X Fall | 0.005 | -1.107 | 0.861 | 86238.59 | 1 |   |
| Neutral X Rollerblades X Safe Fail v. Wheelchair X Fall | -0.001 | -0.955 | 0.991 | 125000.00 | 1 |   |
| Neutral X Rollerblades X Safe Fail v. Wheelchair X Fall | -0.002 | -0.867 | 1.107 | 71300.34 | 1 |   |
| Neutral X Rollerblades X Safe Fail v. Wheelchair X Fall | -0.005 | -0.861 | 1.107 | 86238.59 | 1 |   |
| Neutral X Chair X Safe Fail v. Wheelchair X Fall | 0.001 | -0.991 | 0.955 | 125000.00 | 1 |   |
| Neutral X Chair X Safe Fail v. Wheelchair X Fall | 0.002 | -1.107 | 0.867 | 71300.34 | 1 |   |
| Comparison                                    | Unstan. S. | Unstan. S. | Unstan. S. | Monte Carlo S. | Study ID |
|---------------------------------------------|------------|------------|------------|----------------|----------|
| Neutral X Wheelchair X Success              | -0.007     | -1.042     | 1.206      | 116871.90      | 1        |
| Negative X Rollerblades X Safe Fail v. Neutral X Wheelchair X Success | -0.006     | -1.300     | 0.983      | 77652.19       | 1        |
| Negative X Wheelchair X Fall                | 0.004      | -1.005     | 1.259      | 107361.80      | 1        |
| Neutral X Wheelchair X Safe Fail v. Neutral X Wheelchair X Success | 0.007      | -1.206     | 1.042      | 116871.90      | 1        |
| Neutral X Wheelchair X Fall                | 0.006      | -0.983     | 1.300      | 77652.19       | 1        |
| Neutral X Wheelchair X Success              | -0.004     | -1.259     | 1.005      | 107361.80      | 1        |
| Negative X Rollerblades X Safe Fail v. Neutral X Wheelchair X Success | -0.007     | -1.042     | 1.206      | 116871.90      | 1        |
| Negative X Wheelchair X Safe Fail v. Neutral X Wheelchair X Success | 0.007      | -1.206     | 1.042      | 116871.90      | 1        |
| Negative X Wheelchair X Fall                | 0.006      | -1.300     | 0.983      | 77652.19       | 1        |
| Neutral X Wheelchair X Fall                | 0.006      | -0.983     | 1.300      | 77652.19       | 1        |
| Negative X Wheelchair X Fall                | 0.004      | -1.005     | 1.259      | 107361.80      | 1        |
| Neutral X Wheelchair X Success              | -0.004     | -1.259     | 1.005      | 107361.80      | 1        |
B. Analysis of Kinematics

In order to test the kinematic differences between the different Endings (Success, Safe Fail, Fall) and Tools (Wheelchair, Rollerblades), and whether or not the six versions of the videos for each Ending and Tool where kinematically different, we calculated the angles formed by the actors’ right elbow and left knee with respect to the floor, and the distance covered by the video actor in the four earlier frames: at the starting position (0 ms), and during the actions after 600 ms, 1200 ms and 1800 ms.

We chose these information because they are representative of the whole action in both rollerblade and wheelchair videos: the right elbow angle is important for wheelchair users to push their wheelchair and for rollerblade users to maintain balance; the left knee angle in respect to the floor shows the preparation for the jumps in rollerblades, and is an indirect measure of the degree of the wheelchair tilt necessary in order to climb the platform; finally, the distance covered is an index of velocity (see Fig. B.1).

**Figure B.1: Graphical representation of angles used for kinematic analyses.**
In red the left knee angle with respect to the floor, in blue the right elbow angle. a = rollerblades video; b= wheelchair video.

The definition of the angles and the distance covered was performed using the free and open-source software Kinovea ver. 0.8.15 (Copyright 2006-2011 Joan Charmant & Contributors – www.kinovea.org).

**Data handling and Statistical Analyses**
The kinematic information was obtained from the 36 videos used in the Action Anticipation paradigm (see the main text) in the frames at 0 ms, 600 ms, 1200 ms and 1800 ms.
First, for each combination of Ending and Tool, we tested if there were differences between the six videos. Three separated analyses were conducted with the distance covered (in pixels), the right elbow angle (in radians), the left knee angle (in radians) as dependent variables (d.v.). The ID of the Video and the Frame (0, 600, 1200, 1800 ms) were the independent variables.

As a second step, we tested if there were kinematic differences between Tools and Endings. We tested all the above-mentioned d.v., with Ending (Success, Safe Fail, Fall), Tool (Wheelchair, Rollerblades) and Frame (0, 600, 1200, 1800 ms) as independent variables.

All the analyses were conducted following a Bayesian approach, similar to the one used for the Action Anticipation data (see below C). We computed the modes (Mo) and HPDIs for the µ parameters of the β coefficients.

The mathematical description of the Hierarchical Bayesian Linear Model is reported in Table B.1 (differences among videos) and Table B.2 (differences among tools and endings) and the corresponding JAGS codes (the script for the Bayesian analysis) are reported in Code B.1 and Code B.2, respectively.

The coefficients reported in Table B.3 and Table B.4 are the same as seen in Table A.2.

In Table B.3 we can observe that there are no differences between the six versions of the same video, both for the main effects and the covariation with Frame (0, 600, 1200 and 1800 ms). The contrasts concern the comparisons between the main effects of the videos, and then their covariation with the Frame.

In all cases, the different six versions of videos were not different in kinematics.

In Table B.4 we report the overall analyses of video kinematics, with Frame (0, 600, 1200 and 1800 ms), Ending (Safe Fail, Success, Fall) and Tool (Wheelchair, Rollerblades) as independent variables. As described in the main text, the left knee angle is only able to discriminate between Wheelchair and Rollerblade Videos, as expected. In fact, while in Rollerblade Videos the left knee has a great modulation, the left knee in Wheelchair Videos is only able to detect the tilt of the Wheelchair, which occurs in later frames. Furthermore, the direction of the angle in Wheelchair and Rollerblades Videos is opposite (as seen in Fig. B.1).

The right elbow angle is able to discriminate between the different tools, but also between different Endings. In particular, there is a specific pattern with Success > Fall > Safe Fail. In Wheelchair Videos Safe Fail have greater angles than Success Endings, while the opposite relation is observable in Rollerblades videos. Finally, in Safe Fail Endings, Wheelchair Videos have greater angles than Rollerblades videos.

Distances are able to discriminate between Wheelchair and Rollerblades Videos, and between Success, Fall and Safe Fail Videos.

The ROPE for the angles was [-0.02; 0.02], while for distance was [-2; 2].
Estimation of the Coefficients via Hierarchical Bayesian Linear Model with non-informative prior

Table B.1: Hierarchical Bayesian Model for the non-informative prior for the Linear Model to test differences among videos

| Formula | Rows in the JAGS code | Description |
|---------|-----------------------|-------------|
| $y \sim \text{Normal}(\mu, \sigma^2)$ | 4 | Likelihood |
| $\mu = \alpha + \beta_f v + \beta_v$ | 5 | Linear model |
| $\alpha \sim \text{Normal}(0, \sigma^2_\alpha)$ | 15 | Prior for $\alpha$ |
| $\beta_f \sim \text{Normal}(0, \sigma^2_f)$ | 13 | Prior for $\beta_f$ |
| $\beta_v \sim \text{Normal}(0, \sigma^2_v)$ | 9 | Prior for $\beta_v$ |
| $\beta_{f:v} \sim \text{Normal}(0, \sigma^2_{f:v})$ | 10 | Prior for $\beta_{f:v}$ |
| $\sigma^2 \sim \text{Uniform}(0.01, 100)$ | 17-20 | Hyperprior. Prior for all the $\sigma^2$... |

Code B.1: JAGS code for the Hierarchical Bayesian Linear Model for the non-informative prior to test differences among videos

```jags
1  model {
2    ## Likelihood
3    for(i in 1:Ntotal){
4      y[i] ~ dnorm(mu[i], 1/pow(sigma[i],2))
5      mu[i] <- alpha + B_v[v[i]] + frame[i]*(B_f+B_vf[v[i]])
6    }
7
8    for(iv in 1:nvideo){
9      B_v[iv] ~ dnorm(0, 1/pow(video_Sigma,2))
10     B_vf[iv] ~ dnorm(0, 1/pow(frame_Sigma,2))
11    }
12
13    B_f ~ dnorm(0, 1/pow(length_Sigma,2))
14
15    alpha ~ dnorm(0, 0.001)
16
17    ## Hyperpriors
18    frame_Sigma ~ dunif(0.01,100)
19    video_Sigma ~ dunif(0.01,100)
20    sigma ~ dunif(0.01,100)
21
22    ## Code for Sum-to-zero coefficients
23    ## ...
24  }
```

Table B.2: Hierarchical Bayesian Model for the non-informative prior for the Linear Model to test differences among Endings and Tools

| Formula | Rows in the JAGS code | Description |
|---------|-----------------------|-------------|
| $y \sim \text{Normal}(\mu, \sigma^2)$ | 4 | Likelihood |
| $\mu = \alpha + \beta_f + \beta_v + \beta_{f:v} + \beta_{f:e} + \beta_{f:e:v}$ | 6-7 | Linear model |
| $\alpha \sim \text{Normal}(0, \sigma^2_\alpha)$ | 29 | Prior for $\alpha$ |
| $\beta_f \sim \text{Normal}(0, \sigma^2_f)$ | 27 | Prior for $\beta_f$ |
Code B.2: JAGS code for the Hierarchical Bayesian Linear Model for the non-informative prior to test differences among Endings and Tools

```
model {
  ## Likelihood
  for(i in 1:Ntotal){
    y[i] ~ dnorm(mu[i], 1/pow(sigma[i],2))
    mu[i] <- alpha + B_e[e[i]] + B_t[t[i]] + B_te[t[i],e[i]] +
             frame[i]*(B_f+B_ef[e[i]]+B_tef[t[i],e[i]]+ B_tf[t[i]])
  }

  for(it in 1:ntool){
    for(ie in 1:nending){
      B_te[it,ie] ~ dnorm(0.0 , 1/pow(TE_Sigma,2))
      B_tef[it,ie]~dnorm(0.0 , 1/pow(frame_Sigma,2))
    }
  }

  for(ie in 1:nending){
    B_e[ie] ~ dnorm(0.0 , 1/pow(ending_Sigma,2))
    B_ef[ie]~dnorm(0.0 , 1/pow(frame_Sigma,2))
  }

  for(it in 1:ntool){
    B_t[it] ~ dnorm(0.0 , 1/pow(tool_Sigma,2))
    B_tf[it]~dnorm(0.0 , 1/pow(frame_Sigma,2))
  }

  B_f ~ dnorm(0.0 , 1/pow(frame_Sigma,2))
  alpha ~ dnorm(0.0 , 0.001)

  ## Hyperpriors
  TE_Sigma ~ dunif(0.01,100)
  frame_Sigma ~ dunif(0.01,100)
  ending_Sigma ~ dunif(0.01,100)
  tool_Sigma ~ dunif(0.01,100)
  sigma ~ dunif(0.01,100)

  ## Code for Sum-to-zero coefficients
  ## ...
}
```

Table B.3: Contrasts from the posterior distributions – differences among single videos

Left Knee Angle; Video: Wheelchair; Ending: Fail
| Video contrasts                  | Mode  | HPDI  | ESS     | \( \hat{R} \) |
|---------------------------------|-------|-------|---------|--------------|
| Video 1 v. Video 2             | -0.01 | -0.51 | 0.13    | 16583.15     | 1.00 |
| Video 1 v. Video 3             | 0.00  | -0.35 | 0.22    | 71681.48     | 1.00 |
| Video 1 v. Video 4             | -0.01 | -0.48 | 0.14    | 18727.91     | 1.00 |
| Video 1 v. Video 5             | -0.01 | -0.38 | 0.20    | 38813.61     | 1.00 |
| Video 1 v. Video 6             | -0.01 | -0.37 | 0.21    | 49549.26     | 1.00 |
| Video 2 v. Video 3             | 0.01  | -0.18 | 0.42    | 25111.42     | 1.00 |
| Video 2 v. Video 4             | 0.00  | -0.26 | 0.29    | 10726.59     | 1.00 |
| Video 2 v. Video 5             | 0.00  | -0.20 | 0.38    | 38604.48     | 1.00 |
| Video 2 v. Video 6             | 0.01  | -0.18 | 0.40    | 32265.40     | 1.00 |
| Video 3 v. Video 4             | 0.00  | -0.40 | 0.18    | 31747.11     | 1.00 |
| Video 3 v. Video 5             | 0.00  | -0.32 | 0.24    | 90502.65     | 1.00 |
| Video 3 v. Video 6             | 0.00  | -0.30 | 0.26    | 106481.12    | 1.00 |
| Video 4 v. Video 5             | 0.00  | -0.22 | 0.35    | 53438.99     | 1.00 |
| Video 4 v. Video 6             | 0.00  | -0.20 | 0.38    | 41029.77     | 1.00 |
| Video 5 v. Video 6             | 0.00  | -0.27 | 0.29    | 115356.47    | 1.00 |

| Covariation with frame contrasts | Mode  | HPDI  | ESS     | \( \hat{R} \) |
|---------------------------------|-------|-------|---------|--------------|
| Video 1 v. Video 2             | 0.00  | 0.00  | 0.00    | 32274.12     | 1.00 |
| Video 1 v. Video 3             | 0.00  | 0.00  | 0.00    | 93886.13     | 1.00 |
| Video 1 v. Video 4             | 0.00  | 0.00  | 0.00    | 37262.95     | 1.00 |
| Video 1 v. Video 5             | 0.00  | 0.00  | 0.00    | 70209.23     | 1.00 |
| Video 1 v. Video 6             | 0.00  | 0.00  | 0.00    | 84558.64     | 1.00 |
| Video 2 v. Video 3             | 0.00  | 0.00  | 0.00    | 48248.82     | 1.00 |
| Video 2 v. Video 4             | 0.00  | 0.00  | 0.00    | 116493.18    | 1.00 |
| Video 2 v. Video 5             | 0.00  | 0.00  | 0.00    | 67744.49     | 1.00 |
| Video 2 v. Video 6             | 0.00  | 0.00  | 0.00    | 57287.37     | 1.00 |
| Video 3 v. Video 4             | 0.00  | 0.00  | 0.00    | 56098.73     | 1.00 |
| Video 3 v. Video 5             | 0.00  | 0.00  | 0.00    | 102871.87    | 1.00 |
| Video 3 v. Video 6             | 0.00  | 0.00  | 0.00    | 114014.01    | 1.00 |
| Video 4 v. Video 5             | 0.00  | 0.00  | 0.00    | 82464.63     | 1.00 |
| Video 4 v. Video 6             | 0.00  | 0.00  | 0.00    | 65626.39     | 1.00 |
| Video 5 v. Video 6             | 0.00  | 0.00  | 0.00    | 120000.00    | 1.00 |

**Right Elbow Angle; Video: Wheelchair; Ending: Fail**

| Video contrasts                  | Mode  | HPDI  | ESS     | \( \hat{R} \) |
|---------------------------------|-------|-------|---------|--------------|
| Video 1 v. Video 2             | 0.00  | -0.48 | 0.39    | 117967.88    | 1.00 |
| Video 1 v. Video 3             | -0.02 | -1.02 | 0.09    | 12350.84     | 1.00 |
| Video 1 v. Video 4             | 0.00  | -0.47 | 0.40    | 117185.55    | 1.00 |
| Video 1 v. Video 5             | 0.00  | -0.47 | 0.41    | 117280.85    | 1.00 |
| Video 1 v. Video 6             | 0.01  | -0.35 | 0.52    | 83043.99     | 1.00 |
| Video 2 v. Video 3             | -0.02 | -0.97 | 0.11    | 13202.30     | 1.00 |
| Video 2 v. Video 4             | 0.00  | -0.43 | 0.45    | 120000.00    | 1.00 |
| Video 2 v. Video 5             | 0.00  | -0.45 | 0.43    | 121176.97    | 1.00 |
| Video 2 v. Video 6             | 0.00  | -0.32 | 0.56    | 67263.58     | 1.00 |
| Video 3 v. Video 4             | 0.03  | -0.10 | 0.99    | 13722.91     | 1.00 |
| Video 3 v. Video 5             | 0.02  | -0.11 | 0.96    | 13678.05     | 1.00 |
| Video 3 v. Video 6             | 0.02  | -0.07 | 1.12    | 10833.02     | 1.00 |
| Video 4 v. Video 5             | 0.00  | -0.45 | 0.43    | 120000.00    | 1.00 |
| Video contrasts          | Mode | HPDI     | ESS        | \( \hat{R} \) |
|-------------------------|------|----------|------------|---------------|
| Video 4 v. Video 6      | 0.01 | -0.33    | 0.55       | 70158.94      | 1.00 |
| Video 5 v. Video 6      | 0.01 | -0.30    | 0.59       | 63216.33      | 1.00 |
| **Covariation with frame contrasts** |      |          |            |               |
| Video 1 v. Video 2      | 0.00 | 0.00     | 0.00       | 120000.00     | 1.00 |
| Video 1 v. Video 3      | 0.00 | 0.00     | 0.00       | 19001.44      | 1.00 |
| Video 1 v. Video 4      | 0.00 | 0.00     | 0.00       | 120000.00     | 1.00 |
| Video 1 v. Video 5      | 0.00 | 0.00     | 0.00       | 119313.98     | 1.00 |
| Video 1 v. Video 6      | 0.00 | 0.00     | 0.00       | 102254.90     | 1.00 |
| Video 2 v. Video 3      | 0.00 | 0.00     | 0.00       | 20568.25      | 1.00 |
| Video 2 v. Video 4      | 0.00 | 0.00     | 0.00       | 120000.00     | 1.00 |
| Video 2 v. Video 5      | 0.00 | 0.00     | 0.00       | 120000.00     | 1.00 |
| Video 2 v. Video 6      | 0.00 | 0.00     | 0.00       | 88479.68      | 1.00 |
| Video 3 v. Video 4      | 0.00 | 0.00     | 0.00       | 21073.69      | 1.00 |
| Video 3 v. Video 5      | 0.00 | 0.00     | 0.00       | 21120.45      | 1.00 |
| Video 3 v. Video 6      | 0.00 | 0.00     | 0.00       | 15768.71      | 1.00 |
| Video 4 v. Video 5      | 0.00 | 0.00     | 0.00       | 121578.94     | 1.00 |
| Video 4 v. Video 6      | 0.00 | 0.00     | 0.00       | 89618.49      | 1.00 |
| Video 5 v. Video 6      | 0.00 | 0.00     | 0.00       | 89302.95      | 1.00 |

### Distance; Video: Wheelchair; Ending: Fail

| Video contrasts          | Mode | HPDI     | ESS        | \( \hat{R} \) |
|-------------------------|------|----------|------------|---------------|
| Video 1 v. Video 2      | 0.12 | -18.06   | 25.65      | 46924.00      | 1.00 |
| Video 1 v. Video 3      | 0.28 | -14.54   | 30.95      | 20454.33      | 1.00 |
| Video 1 v. Video 4      | -0.06| -13.81   | 31.98      | 18920.94      | 1.00 |
| Video 1 v. Video 5      | -0.06| -14.02   | 31.53      | 18699.27      | 1.00 |
| Video 1 v. Video 6      | 0.18 | -10.38   | 39.73      | 9680.96       | 1.00 |
| Video 2 v. Video 3      | -0.14| -17.76   | 25.82      | 56540.26      | 1.00 |
| Video 2 v. Video 4      | -0.11| -18.09   | 25.69      | 50.555.63     | 1.00 |
| Video 2 v. Video 5      | -0.01| -17.65   | 25.74      | 50135.18      | 1.00 |
| Video 2 v. Video 6      | 0.25 | -12.94   | 33.58      | 15125.78      | 1.00 |
| Video 3 v. Video 4      | -0.11| -20.83   | 22.41      | 120000.00     | 1.00 |
| Video 3 v. Video 5      | -0.12| -20.69   | 22.47      | 120000.00     | 1.00 |
| Video 3 v. Video 6      | 0.07 | -15.53   | 29.01      | 29552.32      | 1.00 |
| Video 4 v. Video 5      | 0.09 | -21.45   | 21.57      | 128258.34     | 1.00 |
| Video 4 v. Video 6      | -0.10| -15.55   | 28.87      | 33741.36      | 1.00 |
| Video 5 v. Video 6      | 0.01 | -15.41   | 28.88      | 31768.75      | 1.00 |
| **Covariation with frame contrasts** |      |          |            |               |
| Video 1 v. Video 2      | 0.02 | -0.01    | 0.04       | 81068.95      | 1.00 |
| Video 1 v. Video 3      | 0.00 | -0.03    | 0.03       | 46023.47      | 1.00 |
| Video 1 v. Video 4      | 0.00 | -0.03    | 0.03       | 41504.13      | 1.00 |
| Video 1 v. Video 5      | 0.03 | 0.00     | 0.05       | 41725.20      | 1.00 |
| Video 1 v. Video 6      | 0.02 | -0.01    | 0.05       | 19336.95      | 1.00 |
| Video 2 v. Video 3      | -0.02| -0.04    | 0.01       | 86715.60      | 1.00 |
| Video 2 v. Video 4      | -0.01| -0.04    | 0.01       | 84602.48      | 1.00 |
| Video 2 v. Video 5      | 0.01 | -0.01    | 0.04       | 90931.34      | 1.00 |
| Video 2 v. Video 6      | 0.00 | -0.03    | 0.03       | 32486.02      | 1.00 |
| Video 3 v. Video 4      | 0.00 | -0.02    | 0.03       | 120364.51     | 1.00 |
| Video 3 v. Video 5      | 0.03 | 0.00     | 0.05       | 117904.89     | 1.00 |
| Video contrasts       | Mode | HPDI  | ESS  | \( \hat{R} \) |
|----------------------|------|-------|------|--------------|
| Video 1 v. Video 2   | 0.00 | -0.06 | 0.11 | 58547.48     |
| Video 1 v. Video 3   | 0.01 | -0.06 | 0.11 | 57736.04     |
| Video 1 v. Video 4   | 0.01 | -0.04 | 0.14 | 25364.00     |
| Video 1 v. Video 5   | 0.00 | -0.07 | 0.09 | 95402.58     |
| Video 1 v. Video 6   | 0.01 | -0.06 | 0.11 | 65885.84     |
| Video 2 v. Video 3   | 0.00 | -0.08 | 0.09 | 120000.00    |
| Video 2 v. Video 4   | 0.01 | -0.06 | 0.12 | 51573.53     |
| Video 2 v. Video 5   | 0.00 | -0.10 | 0.07 | 87401.74     |
| Video 2 v. Video 6   | 0.00 | -0.09 | 0.08 | 120000.00    |
| Video 3 v. Video 4   | 0.01 | -0.06 | 0.11 | 52466.68     |
| Video 3 v. Video 5   | 0.00 | -0.10 | 0.07 | 87853.93     |
| Video 3 v. Video 6   | 0.00 | -0.08 | 0.08 | 118811.93    |
| Video 4 v. Video 5   | -0.01| -0.13 | 0.05 | 32773.91     |
| Video 4 v. Video 6   | -0.01| -0.12 | 0.06 | 48593.30     |
| Video 5 v. Video 6   | 0.00 | -0.07 | 0.10 | 100124.19    |

| Covariation with frame contrasts | Mode | HPDI  | ESS  | \( \hat{R} \) |
|----------------------------------|------|-------|------|--------------|
| Video 1 v. Video 2               | 0.00 | 0.00  | 0.00 | 87695.80     |
| Video 1 v. Video 3               | 0.00 | 0.00  | 0.00 | 83897.36     |
| Video 1 v. Video 4               | 0.00 | 0.00  | 0.00 | 45074.52     |
| Video 1 v. Video 5               | 0.00 | 0.00  | 0.00 | 114630.67    |
| Video 1 v. Video 6               | 0.00 | 0.00  | 0.00 | 92063.65     |
| Video 2 v. Video 3               | 0.00 | 0.00  | 0.00 | 120000.00    |
| Video 2 v. Video 4               | 0.00 | 0.00  | 0.00 | 82031.76     |
| Video 2 v. Video 5               | 0.00 | 0.00  | 0.00 | 106489.60    |
| Video 2 v. Video 6               | 0.00 | 0.00  | 0.00 | 120000.00    |
| Video 3 v. Video 4               | 0.00 | 0.00  | 0.00 | 82781.75     |
| Video 3 v. Video 5               | 0.00 | 0.00  | 0.00 | 103358.60    |
| Video 3 v. Video 6               | 0.00 | 0.00  | 0.00 | 118986.51    |
| Video 4 v. Video 5               | 0.00 | 0.00  | 0.00 | 57628.76     |
| Video 4 v. Video 6               | 0.00 | 0.00  | 0.00 | 76389.68     |
| Video 5 v. Video 6               | 0.00 | 0.00  | 0.00 | 111622.23    |

| Right Elbow Angle; Video: Wheelchair; Ending: Fall |
|-------------------------------------------|------|-------|------|--------------|
| Video contrasts                          | Mode | HPDI  | ESS  | \( \hat{R} \) |
| Video 1 v. Video 2                       | 0.00 | -0.29 | 0.14 | 34885.23     |
| Video 1 v. Video 3                       | 0.00 | -0.23 | 0.19 | 115147.10    |
| Video 1 v. Video 4                       | -0.01| -0.36 | 0.10 | 18231.71     |
| Video 1 v. Video 5                       | 0.00 | -0.25 | 0.16 | 69099.18     |
| Video 1 v. Video 6                       | 0.00 | -0.25 | 0.16 | 63671.95     |
| Video 2 v. Video 3                       | 0.00 | -0.15 | 0.27 | 45855.36     |
| Video 2 v. Video 4                       | 0.00 | -0.26 | 0.16 | 52122.22     |
| Video contrasts                  | Mode | HPDI  | ESS    | \( \hat{R} \) |
|---------------------------------|------|-------|--------|-------------|
| Video 2 v. Video 5              | 0.00 | -0.18 | 0.23   | 94199.99    | 1.00 |
| Video 2 v. Video 6              | 0.00 | -0.17 | 0.24   | 84505.01    | 1.00 |
| Video 3 v. Video 4              | -0.01| -0.33 | 0.11   | 21675.63    | 1.00 |
| Video 3 v. Video 5              | 0.00 | -0.23 | 0.18   | 90252.41    | 1.00 |
| Video 3 v. Video 6              | 0.00 | -0.23 | 0.18   | 88761.16    | 1.00 |
| Video 4 v. Video 5              | 0.01 | -0.14 | 0.29   | 31303.03    | 1.00 |
| Video 4 v. Video 6              | 0.01 | -0.13 | 0.30   | 30810.25    | 1.00 |
| Video 5 v. Video 6              | 0.00 | -0.20 | 0.20   | 121553.70   | 1.00 |

**Covariation with frame contrasts**

| Video contrasts                  | Mode | HPDI  | ESS    | \( \hat{R} \) |
|---------------------------------|------|-------|--------|-------------|
| Video 1 v. Video 2              | 0.00 | 0.00  | 0.00   | 64928.79    | 1.00 |
| Video 1 v. Video 3              | 0.00 | 0.00  | 0.00   | 120000.00   | 1.00 |
| Video 1 v. Video 4              | 0.00 | 0.00  | 0.00   | 36779.00    | 1.00 |
| Video 1 v. Video 5              | 0.00 | 0.00  | 0.00   | 94579.00    | 1.00 |
| Video 1 v. Video 6              | 0.00 | 0.00  | 0.00   | 94556.08    | 1.00 |
| Video 2 v. Video 3              | 0.00 | 0.00  | 0.00   | 79048.22    | 1.00 |
| Video 2 v. Video 4              | 0.00 | 0.00  | 0.00   | 85243.63    | 1.00 |
| Video 2 v. Video 5              | 0.00 | 0.00  | 0.00   | 114711.74   | 1.00 |
| Video 2 v. Video 6              | 0.00 | 0.00  | 0.00   | 105437.82   | 1.00 |
| Video 3 v. Video 4              | 0.00 | 0.00  | 0.00   | 40013.43    | 1.00 |
| Video 3 v. Video 5              | 0.00 | 0.00  | 0.00   | 111975.04   | 1.00 |
| Video 3 v. Video 6              | 0.00 | 0.00  | 0.00   | 106640.23   | 1.00 |
| Video 4 v. Video 5              | 0.00 | 0.00  | 0.00   | 60420.97    | 1.00 |
| Video 4 v. Video 6              | 0.00 | 0.00  | 0.00   | 57390.12    | 1.00 |
| Video 5 v. Video 6              | 0.00 | 0.00  | 0.00   | 120543.85   | 1.00 |

**Distance: Video: Wheelchair; Ending: Fall**

| Video contrasts                  | Mode | HPDI  | ESS    | \( \hat{R} \) |
|---------------------------------|------|-------|--------|-------------|
| Video 2 v. Video 5              | 0.08 | -32.96| 18.82  | 45406.46    | 1.00 |
| Video 1 v. Video 3              | 0.03 | -27.79| 23.06  | 96415.26    | 1.00 |
| Video 1 v. Video 4              | -0.33| -44.30| 12.72  | 13862.45    | 1.00 |
| Video 1 v. Video 5              | 0.16 | -25.80| 25.11  | 118050.73   | 1.00 |
| Video 1 v. Video 6              | 0.25 | -25.81| 24.82  | 118886.99   | 1.00 |
| Video 2 v. Video 3              | 0.08 | -21.31| 30.06  | 73603.43    | 1.00 |
| Video 2 v. Video 4              | -0.27| -36.41| 16.81  | 25963.10    | 1.00 |
| Video 2 v. Video 5              | -0.09| -19.83| 31.88  | 50930.65    | 1.00 |
| Video 2 v. Video 6              | 0.08 | -19.35| 32.63  | 40797.18    | 1.00 |
| Video 3 v. Video 4              | -0.02| -41.25| 14.02  | 16309.98    | 1.00 |
| Video 3 v. Video 5              | 0.04 | -23.96| 26.88  | 114788.59   | 1.00 |
| Video 3 v. Video 6              | 0.09 | -22.59| 28.46  | 97349.71    | 1.00 |
| Video 4 v. Video 5              | 0.30 | -13.49| 42.79  | 14385.37    | 1.00 |
| Video 4 v. Video 6              | 0.56 | -13.39| 43.96  | 13227.11    | 1.00 |
| Video 5 v. Video 6              | 0.00 | -23.86| 26.86  | 115491.58   | 1.00 |

**Covariation with frame contrasts**

| Video contrasts                  | Mode | HPDI  | ESS    | \( \hat{R} \) |
|---------------------------------|------|-------|--------|-------------|
| Video 1 v. Video 2              | -0.04| -0.07 | -0.01  | 76211.72    | 1.00 |
| Video 1 v. Video 3              | 0.00 | -0.03 | 0.03   | 115832.89   | 1.00 |
| Video 1 v. Video 4              | -0.05| -0.08 | -0.02  | 29249.29    | 1.00 |
| Video 1 v. Video 5              | 0.03 | 0.00  | 0.06   | 118312.39   | 1.00 |
| Video 1 v. Video 6              | 0.01 | -0.02 | 0.04   | 120096.37   | 1.00 |
| Video contrasts                      | Mode | HPDI | ESS | $\hat{R}$ |
|-------------------------------------|------|------|-----|----------|
| Video 1 v. Video 2                  | 0.00 | -0.14| 0.15| 120376.56| 1.00    |
| Video 1 v. Video 3                  | -0.01| -0.21| 0.10| 30453.17 | 1.00    |
| Video 1 v. Video 4                  | 0.00 | -0.18| 0.11| 57445.75 | 1.00    |
| Video 1 v. Video 5                  | 0.00 | -0.16| 0.13| 103408.68| 1.00    |
| Video 1 v. Video 6                  | 0.00 | -0.17| 0.13| 78512.66 | 1.00    |
| Video 2 v. Video 3                  | -0.01| -0.21| 0.10| 32854.47 | 1.00    |
| Video 2 v. Video 4                  | -0.01| -0.18| 0.11| 61493.80 | 1.00    |
| Video 2 v. Video 5                  | 0.00 | -0.15| 0.14| 109017.19| 1.00    |
| Video 2 v. Video 6                  | 0.00 | -0.16| 0.13| 84453.47 | 1.00    |
| Video 3 v. Video 4                  | 0.00 | -0.12| 0.17| 72540.81 | 1.00    |
| Video 3 v. Video 5                  | 0.00 | -0.11| 0.19| 44131.59 | 1.00    |
| Video 3 v. Video 6                  | 0.00 | -0.11| 0.18| 58910.63 | 1.00    |
| Video 4 v. Video 5                  | 0.00 | -0.12| 0.17| 86867.58 | 1.00    |
| Video 4 v. Video 6                  | 0.00 | -0.13| 0.16| 108718.81| 1.00    |
| Video 5 v. Video 6                  | 0.00 | -0.16| 0.13| 114409.42| 1.00    |

| Covariation with frame contrasts    | Mode | HPDI | ESS | $\hat{R}$ |
|-------------------------------------|------|------|-----|----------|
| Video 1 v. Video 2                  | 0.00 | 0.00 | 0.00| 121873.44| 1.00    |
| Video 1 v. Video 3                  | 0.00 | 0.00 | 0.00| 58501.78 | 1.00    |
| Video 1 v. Video 4                  | 0.00 | 0.00 | 0.00| 89580.47 | 1.00    |
| Video 1 v. Video 5                  | 0.00 | 0.00 | 0.00| 118852.55| 1.00    |
| Video 1 v. Video 6                  | 0.00 | 0.00 | 0.00| 103006.00| 1.00    |
| Video 2 v. Video 3                  | 0.00 | 0.00 | 0.00| 61699.97 | 1.00    |
| Video 2 v. Video 4                  | 0.00 | 0.00 | 0.00| 99865.18 | 1.00    |
| Video 2 v. Video 5                  | 0.00 | 0.00 | 0.00| 116216.99| 1.00    |
| Video 2 v. Video 6                  | 0.00 | 0.00 | 0.00| 111407.98| 1.00    |
| Video 3 v. Video 4                  | 0.00 | 0.00 | 0.00| 95555.01 | 1.00    |
| Video 3 v. Video 5                  | 0.00 | 0.00 | 0.00| 74245.80 | 1.00    |
| Video 3 v. Video 6                  | 0.00 | 0.00 | 0.00| 92199.22 | 1.00    |
| Video 4 v. Video 5                  | 0.00 | 0.00 | 0.00| 105542.38| 1.00    |
| Video 4 v. Video 6                  | 0.00 | 0.00 | 0.00| 120000.00| 1.00    |
| Video 5 v. Video 6                  | 0.00 | 0.00 | 0.00| 120000.00| 1.00    |

**Left Knee Angle; Video: Wheelchair; Ending: Success**

**Right Elbow Angle; Video: Wheelchair; Ending: Success**

| Video contrasts                      | Mode | HPDI | ESS | $\hat{R}$ |
|-------------------------------------|------|------|-----|----------|
| Video 1 v. Video 2                  | -0.01| -0.25| 0.14| 40622.14 | 1.00    |
| Video 1 v. Video 3 | 0.00 | -0.17 | 0.21 | 98764.51 | 1.00 |
|-------------------|------|-------|------|-----------|------|
| Video 1 v. Video 4 | 0.00 | -0.24 | 0.14 | 47697.76 | 1.00 |
| Video 1 v. Video 5 | 0.00 | -0.24 | 0.14 | 51893.18 | 1.00 |
| Video 1 v. Video 6 | 0.00 | -0.24 | 0.14 | 51914.66 | 1.00 |
| Video 2 v. Video 3 | 0.01 | -0.12 | 0.27 | 30434.75 | 1.00 |
| Video 2 v. Video 4 | 0.00 | -0.18 | 0.19 | 125916.74 | 1.00 |
| Video 2 v. Video 5 | 0.00 | -0.18 | 0.19 | 111413.31 | 1.00 |
| Video 2 v. Video 6 | 0.00 | -0.18 | 0.19 | 119011.26 | 1.00 |
| Video 3 v. Video 4 | 0.00 | -0.27 | 0.13 | 33729.69 | 1.00 |
| Video 3 v. Video 5 | 0.00 | -0.26 | 0.13 | 36150.41 | 1.00 |
| Video 3 v. Video 6 | 0.00 | -0.27 | 0.12 | 34029.76 | 1.00 |
| Video 4 v. Video 5 | 0.00 | -0.18 | 0.20 | 119462.62 | 1.00 |
| Video 4 v. Video 6 | 0.00 | -0.19 | 0.19 | 123527.41 | 1.00 |
| Video 5 v. Video 6 | 0.00 | -0.18 | 0.19 | 118892.99 | 1.00 |

**Covariation with frame contrasts**

| Video contrasts | Mode | HPDI  | ESS  | Ê |
|-----------------|------|-------|------|------|
| Video 1 v. Video 2 | 0.00 | 0.00 | 0.00 | 80812.70 | 1.00 |
| Video 1 v. Video 3 | 0.00 | 0.00 | 0.00 | 110690.46 | 1.00 |
| Video 1 v. Video 4 | 0.00 | 0.00 | 0.00 | 84784.90 | 1.00 |
| Video 1 v. Video 5 | 0.00 | 0.00 | 0.00 | 90342.95 | 1.00 |
| Video 1 v. Video 6 | 0.00 | 0.00 | 0.00 | 88306.80 | 1.00 |
| Video 2 v. Video 3 | 0.00 | 0.00 | 0.00 | 59739.89 | 1.00 |
| Video 2 v. Video 4 | 0.00 | 0.00 | 0.00 | 120000.00 | 1.00 |
| Video 2 v. Video 5 | 0.00 | 0.00 | 0.00 | 118833.26 | 1.00 |
| Video 2 v. Video 6 | 0.00 | 0.00 | 0.00 | 121209.68 | 1.00 |
| Video 3 v. Video 4 | 0.00 | 0.00 | 0.00 | 63843.54 | 1.00 |
| Video 3 v. Video 5 | 0.00 | 0.00 | 0.00 | 65782.19 | 1.00 |
| Video 3 v. Video 6 | 0.00 | 0.00 | 0.00 | 64694.52 | 1.00 |
| Video 4 v. Video 5 | 0.00 | 0.00 | 0.00 | 120000.00 | 1.00 |
| Video 4 v. Video 6 | 0.00 | 0.00 | 0.00 | 121218.80 | 1.00 |
| Video 5 v. Video 6 | 0.00 | 0.00 | 0.00 | 120000.00 | 1.00 |

**Video contrasts**

| Video contrasts | Mode | HPDI  | ESS  | Ê |
|-----------------|------|-------|------|------|
| Video 1 v. Video 2 | -0.38 | -74.27 | 59.01 | 118806.37 | 1.00 |
| Video 1 v. Video 3 | -89.75 | -162.83 | 3.41 | 14717.31 | 1.00 |
| Video 1 v. Video 4 | -1.72 | -73.69 | 60.29 | 120000.00 | 1.00 |
| Video 1 v. Video 5 | 0.84 | -62.16 | 72.20 | 115573.99 | 1.00 |
| Video 1 v. Video 6 | -0.53 | -69.22 | 64.00 | 120000.00 | 1.00 |
| Video 2 v. Video 3 | -84.42 | -155.95 | 5.83 | 16915.32 | 1.00 |
| Video 2 v. Video 4 | 0.41 | -67.81 | 66.05 | 120000.00 | 1.00 |
| Video 2 v. Video 5 | 1.47 | -57.65 | 76.46 | 106473.88 | 1.00 |
| Video 2 v. Video 6 | 0.57 | -63.37 | 70.31 | 118426.16 | 1.00 |
| Video 3 v. Video 4 | 84.44 | -5.06 | 154.72 | 17186.75 | 1.00 |
| Video 3 v. Video 5 | 102.14 | -3.33 | 166.69 | 13602.57 | 1.00 |
| Video 3 v. Video 6 | 85.78 | -3.98 | 159.14 | 16222.13 | 1.00 |
| Video 4 v. Video 5 | 1.40 | -55.65 | 79.10 | 103094.46 | 1.00 |
| Video 4 v. Video 6 | 0.23 | -64.49 | 69.91 | 120000.00 | 1.00 |
| Video 5 v. Video 6 | -0.94 | -74.82 | 59.28 | 117095.45 | 1.00 |
| Covariation with frame contrasts | Mode  | HPDI  | ESS   | $\hat{R}$ |
|----------------------------------|-------|-------|-------|-----------|
| Video 1 v. Video 2              | -0.01 | -0.07 | 0.05  | 117436.36 | 1.00 |
| Video 1 v. Video 3              | 0.06  | -0.02 | 0.13  | 23992.84  | 1.00 |
| Video 1 v. Video 4              | 0.01  | -0.05 | 0.07  | 118923.79 | 1.00 |
| Video 1 v. Video 5              | -0.01 | -0.07 | 0.06  | 116395.33 | 1.00 |
| Video 1 v. Video 6              | 0.00  | -0.06 | 0.06  | 120000.00 | 1.00 |
| Video 2 v. Video 3              | 0.07  | -0.01 | 0.14  | 24838.24  | 1.00 |
| Video 2 v. Video 4              | 0.02  | -0.04 | 0.08  | 118019.36 | 1.00 |
| Video 2 v. Video 5              | 0.00  | -0.06 | 0.07  | 116912.11 | 1.00 |
| Video 2 v. Video 6              | 0.01  | -0.05 | 0.07  | 120000.00 | 1.00 |
| Video 3 v. Video 4              | -0.05 | -0.11 | 0.03  | 26494.60  | 1.00 |
| Video 3 v. Video 5              | -0.07 | -0.14 | 0.01  | 21353.09  | 1.00 |
| Video 3 v. Video 6              | -0.06 | -0.13 | 0.02  | 25080.01  | 1.00 |
| Video 4 v. Video 5              | -0.02 | -0.08 | 0.04  | 108433.91 | 1.00 |
| Video 4 v. Video 6              | -0.01 | -0.08 | 0.05  | 120000.00 | 1.00 |
| Video 5 v. Video 6              | 0.01  | -0.05 | 0.07  | 116891.27 | 1.00 |

| Left Knee Angle; Video: Rollerblades; Ending: Fail |
|---------------------------------------------------|
| Video contrasts                                   | Mode  | HPDI  | ESS   | $\hat{R}$ |
| Video 1 v. Video 2                                | 0.00  | -0.10 | 0.10  | 117726.51 | 1.00 |
| Video 1 v. Video 3                                | 0.01  | -0.06 | 0.15  | 35038.60  | 1.00 |
| Video 1 v. Video 4                                | 0.00  | -0.09 | 0.10  | 118707.32 | 1.00 |
| Video 1 v. Video 5                                | 0.00  | -0.09 | 0.10  | 113011.65 | 1.00 |
| Video 1 v. Video 6                                | 0.01  | -0.06 | 0.15  | 31529.20  | 1.00 |
| Video 2 v. Video 3                                | 0.01  | -0.06 | 0.15  | 32408.03  | 1.00 |
| Video 2 v. Video 4                                | 0.00  | -0.09 | 0.11  | 120000.00 | 1.00 |
| Video 2 v. Video 5                                | 0.00  | -0.09 | 0.11  | 111996.73 | 1.00 |
| Video 2 v. Video 6                                | 0.01  | -0.06 | 0.16  | 29766.98  | 1.00 |
| Video 3 v. Video 4                                | -0.01 | -0.15 | 0.06  | 39389.86  | 1.00 |
| Video 3 v. Video 5                                | -0.01 | -0.15 | 0.06  | 42252.87  | 1.00 |
| Video 3 v. Video 6                                | 0.00  | -0.10 | 0.10  | 117059.57 | 1.00 |
| Video 4 v. Video 5                                | 0.00  | -0.10 | 0.10  | 120000.00 | 1.00 |
| Video 4 v. Video 6                                | 0.01  | -0.06 | 0.15  | 35192.05  | 1.00 |
| Video 5 v. Video 6                                | 0.01  | -0.06 | 0.15  | 38776.43  | 1.00 |

| Covariation with frame contrasts                  | Mode  | HPDI  | ESS   | $\hat{R}$ |
|--------------------------------------------------|-------|-------|-------|-----------|
| Video 1 v. Video 2                                | 0.00  | 0.00  | 0.00  | 120000.00 | 1.00 |
| Video 1 v. Video 3                                | 0.00  | 0.00  | 0.00  | 62003.06  | 1.00 |
| Video 1 v. Video 4                                | 0.00  | 0.00  | 0.00  | 120000.00 | 1.00 |
| Video 1 v. Video 5                                | 0.00  | 0.00  | 0.00  | 120000.00 | 1.00 |
| Video 1 v. Video 6                                | 0.00  | 0.00  | 0.00  | 53840.82  | 1.00 |
| Video 2 v. Video 3                                | 0.00  | 0.00  | 0.00  | 57698.77  | 1.00 |
| Video 2 v. Video 4                                | 0.00  | 0.00  | 0.00  | 120000.00 | 1.00 |
| Video 2 v. Video 5                                | 0.00  | 0.00  | 0.00  | 118844.34 | 1.00 |
| Video 2 v. Video 6                                | 0.00  | 0.00  | 0.00  | 51636.31  | 1.00 |
| Video 3 v. Video 4                                | 0.00  | 0.00  | 0.00  | 66221.28  | 1.00 |
| Video 3 v. Video 5                                | 0.00  | 0.00  | 0.00  | 69807.84  | 1.00 |
| Video 3 v. Video 6                                | 0.00  | 0.00  | 0.00  | 120000.00 | 1.00 |
| Video 4 v. Video 5                                | 0.00  | 0.00  | 0.00  | 120000.00 | 1.00 |
| Video contrasts | Mode | HPDI  | ESS  | $\hat{R}$ |
|-----------------|------|-------|------|--------|
| Video 1 v. Video 2 | 0.00 | -0.47 | 0.45 | 116923.05 |
| Video 1 v. Video 3 | 0.00 | -0.43 | 0.48 | 114258.05 |
| Video 1 v. Video 4 | 0.00 | -0.40 | 0.53 | 94044.67 |
| Video 1 v. Video 5 | -0.01 | -0.84 | 0.21 | 16253.81 |
| Video 1 v. Video 6 | 0.00 | -0.47 | 0.45 | 114806.14 |
| Video 2 v. Video 3 | 0.00 | -0.42 | 0.50 | 111857.15 |
| Video 2 v. Video 4 | 0.00 | -0.41 | 0.52 | 90497.83 |
| Video 2 v. Video 5 | -0.01 | -0.82 | 0.21 | 16218.05 |
| Video 2 v. Video 6 | 0.00 | -0.48 | 0.45 | 120000.00 |
| Video 3 v. Video 4 | 0.00 | -0.43 | 0.49 | 115758.33 |
| Video 3 v. Video 5 | -0.02 | -0.87 | 0.20 | 15122.19 |
| Video 3 v. Video 6 | 0.00 | -0.50 | 0.42 | 102920.04 |
| Video 4 v. Video 5 | -0.02 | -0.92 | 0.19 | 13115.60 |
| Video 4 v. Video 6 | 0.00 | -0.54 | 0.39 | 75116.75 |
| Video 5 v. Video 6 | 0.01 | -0.22 | 0.82 | 18016.81 |

### Covariation with frame contrasts

| Video contrasts | Mode | HPDI  | ESS  | $\hat{R}$ |
|-----------------|------|-------|------|--------|
| Video 1 v. Video 2 | 0.00 | 0.00 | 0.00 | 120600.42 |
| Video 1 v. Video 3 | 0.00 | 0.00 | 0.00 | 120000.00 |
| Video 1 v. Video 4 | 0.00 | 0.00 | 0.00 | 112571.21 |
| Video 1 v. Video 5 | 0.00 | 0.00 | 0.00 | 29231.30 |
| Video 1 v. Video 6 | 0.00 | 0.00 | 0.00 | 109217.79 |
| Video 2 v. Video 3 | 0.00 | 0.00 | 0.00 | 108872.91 |
| Video 2 v. Video 4 | 0.00 | 0.00 | 0.00 | 28075.14 |
| Video 2 v. Video 5 | 0.00 | 0.00 | 0.00 | 120000.00 |
| Video 2 v. Video 6 | 0.00 | 0.00 | 0.00 | 115065.47 |
| Video 3 v. Video 4 | 0.00 | 0.00 | 0.00 | 27579.74 |
| Video 3 v. Video 5 | 0.00 | 0.00 | 0.00 | 114286.41 |
| Video 3 v. Video 6 | 0.00 | 0.00 | 0.00 | 24851.16 |
| Video 4 v. Video 5 | 0.00 | 0.00 | 0.00 | 105870.20 |
| Video 4 v. Video 6 | 0.00 | 0.00 | 0.00 | 32880.44 |

### Distance; Video: Rollerblades; Ending: Fail

| Video contrasts | Mode | HPDI  | ESS  | $\hat{R}$ |
|-----------------|------|-------|------|--------|
| Video 1 v. Video 2 | 0.04 | -30.58 | 35.69 | 103324.09 |
| Video 1 v. Video 3 | -0.02 | -36.01 | 29.97 | 99239.07 |
| Video 1 v. Video 4 | -0.07 | -30.57 | 35.60 | 102090.95 |
| Video 1 v. Video 5 | -0.01 | -32.03 | 34.11 | 109217.79 |
| Video 1 v. Video 6 | 0.33 | -27.84 | 38.69 | 64836.05 |
| Video 2 v. Video 3 | -0.27 | -37.87 | 28.90 | 64968.13 |
| Video 2 v. Video 4 | -0.36 | -32.88 | 33.10 | 121154.80 |
| Video 2 v. Video 5 | -0.33 | -34.19 | 31.85 | 120000.00 |
| Video 2 v. Video 6 | 0.23 | -30.97 | 35.17 | 100222.52 |
| Video 3 v. Video 4 | -0.14 | -28.10 | 38.37 | 64788.21 | 1.00 |
|-------------------|--------|---------|-------|-----------|-----|
| Video 3 v. Video 5 | 0.11   | -28.72 | 37.51 | 71148.85 | 1.00 |
| Video 3 v. Video 6 | 0.04   | -26.25 | 41.58 | 41150.30 | 1.00 |
| Video 4 v. Video 5 | 0.31   | -33.33 | 32.68 | 113674.47 | 1.00 |
| Video 4 v. Video 6 | 0.35   | -29.42 | 36.72 | 98579.77 | 1.00 |
| Video 5 v. Video 6 | 0.17   | -29.94 | 36.42 | 84868.81 | 1.00 |

| Covariation with frame contrasts | Mode | HPDI | ESS    | $\hat{R}$ |
|----------------------------------|------|------|--------|-----------|
| Video 1 v. Video 2               | 0.02 | -0.03 | 0.06   | 111117.42 | 1.00 |
| Video 1 v. Video 3               | -0.02 | -0.07 | 0.02   | 114009.23 | 1.00 |
| Video 1 v. Video 4               | -0.01 | -0.06 | 0.04   | 120000.00 | 1.00 |
| Video 1 v. Video 5               | -0.02 | -0.06 | 0.03   | 120000.00 | 1.00 |
| Video 1 v. Video 6               | 0.00  | -0.04 | 0.05   | 103576.15 | 1.00 |
| Video 2 v. Video 3               | -0.04 | -0.08 | 0.01   | 88765.82  | 1.00 |
| Video 2 v. Video 4               | -0.03 | -0.07 | 0.02   | 120000.00 | 1.00 |
| Video 2 v. Video 5               | -0.03 | -0.08 | 0.01   | 118508.10 | 1.00 |
| Video 2 v. Video 6               | -0.01 | -0.06 | 0.03   | 117375.70 | 1.00 |
| Video 3 v. Video 4               | 0.01  | -0.03 | 0.06   | 95122.12  | 1.00 |
| Video 3 v. Video 5               | 0.01  | -0.04 | 0.05   | 112566.71 | 1.00 |
| Video 3 v. Video 6               | 0.03  | -0.02 | 0.07   | 77740.72  | 1.00 |
| Video 4 v. Video 5               | -0.01 | -0.05 | 0.04   | 120000.00 | 1.00 |
| Video 4 v. Video 6               | 0.01  | -0.03 | 0.06   | 120000.00 | 1.00 |
| Video 5 v. Video 6               | 0.02  | -0.03 | 0.06   | 117023.26 | 1.00 |

### Left Knee Angle; Video: Rollerblades; Ending: Fall

| Video contrasts | Mode | HPDI | ESS    | $\hat{R}$ |
|-----------------|------|------|--------|-----------|
| Video 1 v. Video 2 | -0.01 | -0.10 | 0.06   | 71172.22  | 1.00 |
| Video 1 v. Video 3 | -0.01 | -0.10 | 0.06   | 79206.55  | 1.00 |
| Video 1 v. Video 4 | 0.01  | -0.06 | 0.09   | 92268.84  | 1.00 |
| Video 1 v. Video 5 | -0.01 | -0.13 | 0.04   | 36819.36  | 1.00 |
| Video 1 v. Video 6 | -0.01 | -0.14 | 0.04   | 29011.14  | 1.00 |
| Video 2 v. Video 3 | 0.00  | -0.07 | 0.08   | 120000.00 | 1.00 |
| Video 2 v. Video 4 | 0.01  | -0.05 | 0.12   | 46133.98  | 1.00 |
| Video 2 v. Video 5 | -0.01 | -0.10 | 0.06   | 71852.38  | 1.00 |
| Video 2 v. Video 6 | -0.01 | -0.11 | 0.05   | 52116.16  | 1.00 |
| Video 3 v. Video 4 | 0.01  | -0.05 | 0.11   | 50289.96  | 1.00 |
| Video 3 v. Video 5 | -0.01 | -0.10 | 0.06   | 65989.54  | 1.00 |
| Video 3 v. Video 6 | -0.01 | -0.11 | 0.05   | 46647.63  | 1.00 |
| Video 4 v. Video 5 | -0.02 | -0.14 | 0.03   | 26067.60  | 1.00 |
| Video 4 v. Video 6 | -0.02 | -0.15 | 0.03   | 22426.29  | 1.00 |
| Video 5 v. Video 6 | 0.00  | -0.09 | 0.07   | 108224.49 | 1.00 |

| Covariation with frame contrasts | Mode | HPDI | ESS    | $\hat{R}$ |
|----------------------------------|------|------|--------|-----------|
| Video 1 v. Video 2               | 0.00  | 0.00  | 0.00   | 91248.18  | 1.00 |
| Video 1 v. Video 3               | 0.00  | 0.00  | 0.00   | 101754.04 | 1.00 |
| Video 1 v. Video 4               | 0.00  | 0.00  | 0.00   | 106667.66 | 1.00 |
| Video 1 v. Video 5               | 0.00  | 0.00  | 0.00   | 54141.16  | 1.00 |
| Video 1 v. Video 6               | 0.00  | 0.00  | 0.00   | 47757.29  | 1.00 |
| Video 2 v. Video 3               | 0.00  | 0.00  | 0.00   | 120375.09 | 1.00 |
| Video 2 v. Video 4               | 0.00  | 0.00  | 0.00   | 70040.21  | 1.00 |
### Right Elbow Angle; Video: Rollerblades; Ending: Fall

| Video contrasts          | Mode  | HPDI  | ESS    | $\hat{R}$ |
|--------------------------|-------|-------|--------|-----------|
| Video 1 v. Video 2       | 0.01  | -0.31 | 0.92   | 19371.15  | 1.00     |
| Video 1 v. Video 3       | 0.01  | -0.28 | 1.00   | 15430.21  | 1.00     |
| Video 1 v. Video 4       | 0.00  | -0.40 | 0.78   | 31427.11  | 1.00     |
| Video 1 v. Video 5       | 0.00  | -0.53 | 0.61   | 99700.48  | 1.00     |
| Video 1 v. Video 6       | 0.01  | -0.49 | 0.66   | 73994.98  | 1.00     |
| Video 2 v. Video 3       | 0.01  | -0.48 | 0.65   | 98344.05  | 1.00     |
| Video 2 v. Video 4       | 0.00  | -0.67 | 0.48   | 76393.97  | 1.00     |
| Video 2 v. Video 5       | 0.00  | -0.82 | 0.38   | 26650.39  | 1.00     |
| Video 2 v. Video 6       | -0.01 | -0.80 | 0.38   | 32116.52  | 1.00     |
| Video 3 v. Video 4       | -0.01 | -0.76 | 0.41   | 41333.17  | 1.00     |
| Video 3 v. Video 5       | -0.01 | -0.91 | 0.32   | 18260.75  | 1.00     |
| Video 3 v. Video 6       | -0.01 | -0.89 | 0.33   | 21660.96  | 1.00     |
| Video 4 v. Video 5       | 0.00  | -0.71 | 0.45   | 49948.94  | 1.00     |
| Video 4 v. Video 6       | -0.01 | -0.69 | 0.46   | 62761.32  | 1.00     |
| Video 5 v. Video 6       | 0.00  | -0.54 | 0.60   | 120000.00 | 1.00     |

### Covariation with frame contrasts

| Video contrasts          | Mode  | HPDI  | ESS    | $\hat{R}$ |
|--------------------------|-------|-------|--------|-----------|
| Video 1 v. Video 2       | 0.00  | 0.00  | 0.00   | 39879.62  | 1.00     |
| Video 1 v. Video 3       | 0.00  | 0.00  | 0.00   | 30570.68  | 1.00     |
| Video 1 v. Video 4       | 0.00  | 0.00  | 0.00   | 58781.98  | 1.00     |
| Video 1 v. Video 5       | 0.00  | 0.00  | 0.00   | 116367.96 | 1.00     |
| Video 1 v. Video 6       | 0.00  | 0.00  | 0.00   | 100594.06 | 1.00     |
| Video 2 v. Video 3       | 0.00  | 0.00  | 0.00   | 115048.90 | 1.00     |
| Video 2 v. Video 4       | 0.00  | 0.00  | 0.00   | 102449.21 | 1.00     |
| Video 2 v. Video 5       | 0.00  | 0.00  | 0.00   | 52075.58  | 1.00     |
| Video 2 v. Video 6       | 0.00  | 0.00  | 0.00   | 58074.27  | 1.00     |
| Video 3 v. Video 4       | 0.00  | 0.00  | 0.00   | 71670.08  | 1.00     |
| Video 3 v. Video 5       | 0.00  | 0.00  | 0.00   | 37847.77  | 1.00     |
| Video 3 v. Video 6       | 0.00  | 0.00  | 0.00   | 41745.69  | 1.00     |
| Video 4 v. Video 5       | 0.00  | 0.00  | 0.00   | 85254.99  | 1.00     |
| Video 4 v. Video 6       | 0.00  | 0.00  | 0.00   | 96271.52  | 1.00     |
| Video 5 v. Video 6       | 0.00  | 0.00  | 0.00   | 118917.21 | 1.00     |

### Distance; Video: Rollerblades; Ending: Fall

| Video contrasts          | Mode  | HPDI  | ESS    | $\hat{R}$ |
|--------------------------|-------|-------|--------|-----------|
| Video 1 v. Video 2       | 0.03  | -44.16| 31.79  | 60968.79  | 1.00     |
| Video 1 v. Video 3       | 0.02  | -39.46| 36.51  | 120000.00 | 1.00     |
| Video 1 v. Video 4       | -0.13 | -46.36| 30.88  | 52212.81  | 1.00     |
| Video 1 v. Video 5 | -0.38 | -39.81 | 35.85 | 113026.06 | 1.00 |
| Video 1 v. Video 6 | -0.15 | -43.00 | 32.55 | 82896.31  | 1.00 |
| Video 2 v. Video 3 | -0.07 | -32.39 | 42.86 | 80231.61  | 1.00 |
| Video 2 v. Video 4 | 0.30  | -39.11 | 36.51 | 120000.00 | 1.00 |
| Video 2 v. Video 5 | 0.33  | -33.71 | 42.04 | 89373.78  | 1.00 |
| Video 2 v. Video 6 | -0.06 | -36.58 | 39.03 | 111319.18 | 1.00 |
| Video 3 v. Video 4 | 0.27  | -43.90 | 32.49 | 64674.53  | 1.00 |
| Video 3 v. Video 5 | -0.09 | -37.90 | 37.65 | 119468.54 | 1.00 |
| Video 3 v. Video 6 | -0.42 | -39.86 | 36.01 | 96116.05  | 1.00 |
| Video 4 v. Video 5 | -0.24 | -32.10 | 44.06 | 63161.53  | 1.00 |
| Video 4 v. Video 6 | -0.24 | -33.34 | 42.53 | 99893.19  | 1.00 |
| Video 5 v. Video 6 | 0.27  | -40.97 | 34.70 | 109365.00 | 1.00 |

| Covariation with frame contrasts | Mode  | HPDI  | ESS   | $\hat{R}$ |
|----------------------------------|-------|-------|-------|-----------|
| Video 1 v. Video 2               | -0.03 | -0.08 | 0.02  | 97252.17  | 1.00 |
| Video 1 v. Video 3               | -0.03 | -0.08 | 0.02  | 115722.20 | 1.00 |
| Video 1 v. Video 4               | -0.03 | -0.08 | 0.02  | 92800.82  | 1.00 |
| Video 1 v. Video 5               | -0.01 | -0.07 | 0.04  | 118210.37 | 1.00 |
| Video 1 v. Video 6               | -0.01 | -0.06 | 0.04  | 118390.87 | 1.00 |
| Video 2 v. Video 3               | 0.00  | -0.05 | 0.05  | 116970.55 | 1.00 |
| Video 2 v. Video 4               | 0.00  | -0.05 | 0.05  | 120000.00 | 1.00 |
| Video 2 v. Video 5               | 0.01  | -0.04 | 0.07  | 109761.72 | 1.00 |
| Video 2 v. Video 6               | 0.01  | -0.04 | 0.07  | 120000.00 | 1.00 |
| Video 3 v. Video 4               | 0.00  | -0.05 | 0.05  | 111945.00 | 1.00 |
| Video 3 v. Video 5               | 0.01  | -0.04 | 0.06  | 118778.27 | 1.00 |
| Video 3 v. Video 6               | 0.01  | -0.04 | 0.06  | 120000.00 | 1.00 |
| Video 4 v. Video 5               | 0.02  | -0.04 | 0.07  | 105618.27 | 1.00 |
| Video 4 v. Video 6               | 0.02  | -0.03 | 0.07  | 120000.00 | 1.00 |
| Video 5 v. Video 6               | 0.00  | -0.05 | 0.05  | 118871.22 | 1.00 |

**Left Knee Angle; Video: Rollerblades; Ending: Success**

| Video contrasts | Mode  | HPDI  | ESS   | $\hat{R}$ |
|-----------------|-------|-------|-------|-----------|
| Video 1 v. Video 2 | 0.00  | -0.11 | 0.16  | 90134.48  | 1.00 |
| Video 1 v. Video 3 | -0.01 | -0.18 | 0.10  | 59286.34  | 1.00 |
| Video 1 v. Video 4 | -0.01 | -0.24 | 0.06  | 20462.54  | 1.00 |
| Video 1 v. Video 5 | -0.01 | -0.18 | 0.09  | 51803.33  | 1.00 |
| Video 1 v. Video 6 | -0.01 | -0.22 | 0.08  | 28756.72  | 1.00 |
| Video 2 v. Video 3 | -0.01 | -0.20 | 0.08  | 35927.72  | 1.00 |
| Video 2 v. Video 4 | -0.02 | -0.27 | 0.05  | 16004.41  | 1.00 |
| Video 2 v. Video 5 | -0.01 | -0.21 | 0.08  | 33680.43  | 1.00 |
| Video 2 v. Video 6 | -0.01 | -0.24 | 0.06  | 20110.98  | 1.00 |
| Video 3 v. Video 4 | -0.01 | -0.20 | 0.09  | 36167.53  | 1.00 |
| Video 3 v. Video 5 | 0.00  | -0.14 | 0.13  | 121266.08 | 1.00 |
| Video 3 v. Video 6 | -0.01 | -0.17 | 0.10  | 65280.01  | 1.00 |
| Video 4 v. Video 5 | 0.01  | -0.09 | 0.19  | 40302.33  | 1.00 |
| Video 4 v. Video 6 | 0.00  | -0.11 | 0.16  | 84610.16  | 1.00 |
| Video 5 v. Video 6 | 0.00  | -0.16 | 0.11  | 73307.21  | 1.00 |

| Covariation with frame contrasts | Mode  | HPDI  | ESS   | $\hat{R}$ |
|----------------------------------|-------|-------|-------|-----------|
| Video 1 v. Video 2               | 0.00  | 0.00  | 0.00  | 111531.98 | 1.00 |
| Video contrasts | Mode | HPDI | ESS | \( \hat{R} \) |
|----------------|------|------|-----|---------|
| Video 1 v. Video 2 | 0.00 | -0.27 | 0.42 | 65306.55 | 1.00 |
| Video 1 v. Video 3 | 0.02 | -0.13 | 0.70 | 13218.27 | 1.00 |
| Video 1 v. Video 4 | 0.01 | -0.19 | 0.56 | 21278.35 | 1.00 |
| Video 1 v. Video 5 | 0.00 | -0.31 | 0.38 | 105087.72 | 1.00 |
| Video 1 v. Video 6 | 0.00 | -0.24 | 0.48 | 43078.48 | 1.00 |
| Video 2 v. Video 3 | 0.01 | -0.18 | 0.59 | 18261.44 | 1.00 |
| Video 2 v. Video 4 | 0.01 | -0.25 | 0.46 | 41450.30 | 1.00 |
| Video 2 v. Video 5 | 0.00 | -0.39 | 0.30 | 97541.27 | 1.00 |
| Video 2 v. Video 6 | 0.00 | -0.31 | 0.39 | 100419.33 | 1.00 |
| Video 3 v. Video 4 | -0.01 | -0.45 | 0.25 | 48970.65 | 1.00 |
| Video 3 v. Video 5 | -0.01 | -0.65 | 0.15 | 14261.78 | 1.00 |
| Video 3 v. Video 6 | -0.01 | -0.55 | 0.19 | 23454.75 | 1.00 |
| Video 4 v. Video 5 | -0.01 | -0.53 | 0.21 | 26640.75 | 1.00 |
| Video 4 v. Video 6 | -0.01 | -0.43 | 0.27 | 66593.26 | 1.00 |
| Video 5 v. Video 6 | 0.00 | -0.27 | 0.44 | 63389.05 | 1.00 |

**Right Elbow Angle; Video: Rollerblades; Ending: Success**

| Covariation with frame contrasts | Mode | HPDI | ESS | \( \hat{R} \) |
|-------------------------------|------|------|-----|---------|
| Video 1 v. Video 2 | 0.00 | 0.00 | 0.00 | 94284.30 | 1.00 |
| Video 1 v. Video 3 | 0.00 | 0.00 | 0.00 | 24560.40 | 1.00 |
| Video 1 v. Video 4 | 0.00 | 0.00 | 0.00 | 41756.15 | 1.00 |
| Video 1 v. Video 5 | 0.00 | 0.00 | 0.00 | 114470.84 | 1.00 |
| Video 1 v. Video 6 | 0.00 | 0.00 | 0.00 | 73062.31 | 1.00 |
| Video 2 v. Video 3 | 0.00 | 0.00 | 0.00 | 34885.97 | 1.00 |
| Video 2 v. Video 4 | 0.00 | 0.00 | 0.00 | 70684.85 | 1.00 |
| Video 2 v. Video 5 | 0.00 | 0.00 | 0.00 | 114613.22 | 1.00 |
| Video 2 v. Video 6 | 0.00 | 0.00 | 0.00 | 116848.58 | 1.00 |
| Video 3 v. Video 4 | 0.00 | 0.00 | 0.00 | 81275.64 | 1.00 |
| Video 3 v. Video 5 | 0.00 | 0.00 | 0.00 | 25433.17 | 1.00 |
| Video 3 v. Video 6 | 0.00 | 0.00 | 0.00 | 43359.60 | 1.00 |
| Video 4 v. Video 5 | 0.00 | 0.00 | 0.00 | 48929.97 | 1.00 |
| Video 4 v. Video 6 | 0.00 | 0.00 | 0.00 | 91167.24 | 1.00 |
| Video 5 v. Video 6 | 0.00 | 0.00 | 0.00 | 92816.49 | 1.00 |
Distance: Video: Rollerblades; Ending: Success

| Video contrasts | Mode | HPDI    | ESS        | $\hat{R}$ |
|-----------------|------|---------|------------|----------|
| Video 1 v. Video 2 | 0.01 | -37.89  | 25.93      | 52350.29 | 1.00     |
| Video 1 v. Video 3 | -0.09 | -32.02  | 31.44      | 110624.32 | 1.00     |
| Video 1 v. Video 4 | -0.20 | -33.94  | 29.33      | 108100.92 | 1.00     |
| Video 1 v. Video 5 | -0.11 | -34.35  | 28.95      | 100457.31 | 1.00     |
| Video 1 v. Video 6 | -0.10 | -27.30  | 36.62      | 65917.80  | 1.00     |

| Video 2 v. Video 3 | -0.04 | -28.71  | 34.63      | 87236.65  | 1.00     |
| Video 2 v. Video 4 | 0.18  | -34.72  | 28.42      | 113828.80 | 1.00     |
| Video 2 v. Video 5 | -0.14 | -27.71  | 35.73      | 77145.95  | 1.00     |
| Video 2 v. Video 6 | -0.29 | -32.60  | 30.67      | 118006.02 | 1.00     |
| Video 3 v. Video 4 | 0.10  | -37.95  | 26.16      | 49645.30  | 1.00     |
| Video 3 v. Video 5 | 0.33  | -33.23  | 30.10      | 110979.87 | 1.00     |
| Video 3 v. Video 6 | 0.18  | -36.28  | 27.53      | 58624.60  | 1.00     |
| Video 4 v. Video 5 | 0.04  | -31.99  | 31.35      | 122410.59 | 1.00     |
| Video 4 v. Video 6 | -0.12 | -27.13  | 36.84      | 56108.72  | 1.00     |
| Video 5 v. Video 6 | -0.29 | -36.89  | 30.21      | 116509.06 | 1.00     |

| Covariation with frame contrasts | Mode | HPDI    | ESS        | $\hat{R}$ |
|---------------------------------|------|---------|------------|----------|
| Video 1 v. Video 2 | 0.00  | -0.04  | 0.04       | 88226.28 | 1.00     |
| Video 1 v. Video 3 | 0.03  | -0.01  | 0.08       | 109133.55 | 1.00    |
| Video 1 v. Video 4 | 0.00  | -0.04  | 0.04       | 117669.85 | 1.00    |
| Video 1 v. Video 5 | -0.02 | -0.06  | 0.03       | 83310.31  | 1.00    |
| Video 1 v. Video 6 | 0.00  | -0.04  | 0.05       | 116509.06 | 1.00    |
| Video 2 v. Video 3 | 0.04  | -0.01  | 0.08       | 92681.53  | 1.00    |
| Video 2 v. Video 4 | 0.00  | -0.04  | 0.05       | 107667.00 | 1.00    |
| Video 2 v. Video 5 | -0.01 | -0.05  | 0.03       | 118325.74 | 1.00    |
| Video 2 v. Video 6 | 0.01  | -0.04  | 0.05       | 112448.19 | 1.00    |
| Video 3 v. Video 4 | -0.03 | -0.07  | 0.01       | 114376.39 | 1.00    |
| Video 3 v. Video 5 | -0.05 | -0.09  | 0.00       | 79968.20  | 1.00    |
| Video 3 v. Video 6 | -0.03 | -0.07  | 0.01       | 113631.27 | 1.00    |
| Video 4 v. Video 5 | -0.02 | -0.06  | 0.03       | 98763.13  | 1.00    |
| Video 4 v. Video 6 | 0.00  | -0.04  | 0.04       | 121269.21 | 1.00    |
| Video 5 v. Video 6 | 0.02  | -0.02  | 0.06       | 99405.89  | 1.00    |

Table B.4: Contrasts from the posterior distributions – differences among Tools and Endings

| Left Knee Angle | Mode | HPDI    | ESS        | $\hat{R}$ |
|-----------------|------|---------|------------|----------|
| Wheelchair v. Rollerblades | -0.29 | -0.36  | -0.21      | 116248.11 | 1.00    |
| Safe Fail v. Fall | 0.02  | -0.05  | 0.11       | 90501.57  | 1.00    |
| Safe Fail v. Success | 0.02  | -0.05  | 0.11       | 80550.98  | 1.00    |
| Fall v. Success | 0.00  | -0.08  | 0.08       | 116182.06 | 1.00    |
| Wheelchair: Safe Fail v. Fall | 0.00  | -0.05  | 0.07       | 67321.40  | 1.00    |
| Wheelchair: Safe Fail v. Success | 0.00  | -0.05  | 0.07       | 64528.81  | 1.00    |
| Scenario                        | Mode | HPDI   | ESS   | $\hat{R}$ |
|--------------------------------|------|--------|-------|----------|
| Wheelchair: Fall v. Success    | 0.00 | -0.06  | 0.06  | 120000.00 | 1.00 |
| Rollerblades: Safe Fail v. Fall | 0.00 | -0.07  | 0.05  | 67321.40  | 1.00 |
| Rollerblades: Safe Fail v. Success | 0.00 | -0.07  | 0.05  | 64528.81  | 1.00 |
| Rollerblades: Fall v. Success  | 0.00 | -0.06  | 0.06  | 120000.00 | 1.00 |
| Safe Fail: Wheelchair v. Rollerblades | 0.01 | -0.05  | 0.09  | 57465.41  | 1.00 |
| Fall: Wheelchair v. Rollerblades | 0.00 | -0.08  | 0.06  | 94989.92  | 1.00 |
| Success: Wheelchair v. Rollerblades | 0.00 | -0.08  | 0.06  | 97966.86  | 1.00 |
| Covariation with Frame - Safe Fail v. Fall | 0.00 | -0.02  | 0.02  | 123379.88 | 1.00 |
| Covariation with Frame - Safe Fail v. Success | 0.00 | -0.02  | 0.02  | 120000.00 | 1.00 |
| Covariation with Frame - Fall v. Success | 0.00 | -0.02  | 0.02  | 120000.00 | 1.00 |
| Covariation with Frame - Wheelchair: Safe Fail v. Fall | 0.00 | -0.02  | 0.02  | 123401.02 | 1.00 |
| Covariation with Frame - Wheelchair: Safe Fail v. Success | 0.00 | -0.02  | 0.02  | 120000.00 | 1.00 |
| Covariation with Frame - Wheelchair: Fall v. Success | 0.00 | -0.02  | 0.02  | 120000.00 | 1.00 |
| Covariation with Frame - Rollerblades: Safe Fail v. Fall | 0.00 | -0.02  | 0.02  | 123390.99 | 1.00 |
| Covariation with Frame - Rollerblades: Safe Fail v. Success | 0.00 | -0.02  | 0.02  | 120000.00 | 1.00 |
| Covariation with Frame - Rollerblades: Fall v. Success | 0.00 | -0.02  | 0.02  | 120000.00 | 1.00 |
| Covariation with Frame - Safe Fail: Wheelchair v. Rollerblades | 0.00 | -0.01  | 0.01  | 120000.00 | 1.00 |
| Covariation with Frame - Fall: Wheelchair v. Rollerblades | 0.00 | -0.01  | 0.01  | 120000.00 | 1.00 |
| Covariation with Frame - Success: Wheelchair v. Rollerblades | 0.00 | -0.01  | 0.01  | 120000.00 | 1.00 |

**Right Elbow Angle**

| Scenario                              | Mode  | HPDI   | ESS    | $\hat{R}$ |
|---------------------------------------|-------|--------|--------|-----------|
| Wheelchair v. Rollerblades            | -0.27 | -0.43  | -0.13  | 104118.81 | 1.00   |
| Safe Fail v. Fall                     | -0.20 | -0.38  | -0.02  | 103071.15 | 1.00   |
| Safe Fail v. Success                  | -0.40 | -0.58  | -0.22  | 69583.13  | 1.00   |
| Fall v. Success                       | -0.20 | -0.38  | -0.02  | 102203.24 | 1.00   |
| Wheelchair: Safe Fail v. Fall         | 0.16  | -0.02  | 0.33   | 30906.44  | 1.00   |
| Wheelchair: Safe Fail v. Success      | 0.25  | 0.04   | 0.42   | 18064.12  | 1.00   |
| Wheelchair: Fall v. Success           | 0.08  | -0.08  | 0.24   | 72250.87  | 1.00   |
| Rollerblades: Safe Fail v. Fall       | -0.16 | -0.33  | 0.02   | 30906.44  | 1.00   |
| Rollerblades: Safe Fail v. Success    | -0.25 | -0.42  | -0.04  | 18064.12  | 1.00   |
| Rollerblades: Fall v. Success         | -0.08 | -0.24  | 0.08   | 72250.87  | 1.00   |
| Safe Fail: Wheelchair v. Rollerblades | 0.26  | 0.04   | 0.48   | 19496.42  | 1.00   |
| Fall: Wheelchair v. Rollerblades      | -0.03 | -0.24  | 0.14   | 104581.18 | 1.00   |
| Success: Wheelchair v. Rollerblades   | -0.20 | -0.41  | 0.00   | 25499.04  | 1.00   |
| Covariation with Frame - Safe Fail v. Fall | 0.00 | -0.02  | 0.02   | 120000.00 | 1.00   |
| Covariation with Frame - Safe Fail v. Success | 0.00 | -0.02 | 0.02 | 120000.00 | 1.00 |
| Covariation with Frame - Fall v. Success | 0.00 | -0.02 | 0.02 | 120000.00 | 1.00 |
| Covariation with Frame - Wheelchair: Safe Fail v. Fall | 0.00 | -0.02 | 0.02 | 120000.00 | 1.00 |
| Covariation with Frame - Wheelchair: Safe Fail v. Success | 0.00 | -0.02 | 0.02 | 120000.00 | 1.00 |
| Covariation with Frame - Wheelchair: Fall v. Success | 0.00 | -0.02 | 0.02 | 120000.00 | 1.00 |
| Covariation with Frame - Wheelchair: Safe Fail v. Fall | 0.00 | -0.02 | 0.02 | 120000.00 | 1.00 |
| Covariation with Frame - Wheelchair: Fall v. Success | 0.00 | -0.02 | 0.02 | 120000.00 | 1.00 |
| Covariation with Frame - Safe Fail: Wheelchair v. Rollerblades | 0.00 | -0.01 | 0.01 | 121190.43 | 1.00 |
| Covariation with Frame - Fall: Wheelchair v. Rollerblades | 0.00 | -0.01 | 0.01 | 121188.11 | 1.00 |
| Covariation with Frame - Success: Wheelchair v. Rollerblades | 0.00 | -0.01 | 0.01 | 121176.84 | 1.00 |

| Distance                                      | Mode | HPDI      | ESS      | \( \hat{R} \) |
|----------------------------------------------|------|-----------|----------|------|
| Wheelchair v. Rollerblades                   | 30.50 | 14.73     | 49.23    | 81404.18 | 1.00 |
| Safe Fail v. Fall                            | 8.72  | -11.43    | 28.26    | 102473.94 | 1.00 |
| Safe Fail v. Success                         | -22.90 | -43.68   | -2.41    | 58232.14 | 1.00 |
| Fall v. Success                              | -31.50 | -52.43    | -9.70    | 43604.88 | 1.00 |
| Wheelchair: Safe Fail v. Fall                | 0.18  | -10.12    | 22.17    | 40866.43 | 1.00 |
| Wheelchair: Safe Fail v. Success             | -0.32 | -25.18    | 8.03     | 21393.95 | 1.00 |
| Wheelchair: Fall v. Success                  | -0.41 | -31.29    | 4.44     | 10719.02 | 1.00 |
| Rollerblades: Safe Fail v. Fall              | -0.18 | -22.17    | 10.12    | 40866.43 | 1.00 |
| Rollerblades: Safe Fail v. Success           | 0.32  | -8.03     | 25.18    | 21393.95 | 1.00 |
| Rollerblades: Fall v. Success                | 0.41  | -4.44     | 31.29    | 10719.02 | 1.00 |
| Safe Fail: Wheelchairv. Rollerblades         | 0.03  | -20.44    | 16.55    | 104240.62 | 1.00 |
| Fall: Wheelchairv. Rollerblades              | -0.50 | -32.25    | 7.24     | 14372.63 | 1.00 |
| Success: Wheelchairv. Rollerblades           | 0.44  | -5.76     | 34.85    | 11752.04 | 1.00 |
| Covariation with Frame - Safe Fail v. Fall   | 0.01  | -0.06     | 0.08     | 120000.00 | 1.00 |
| Covariation with Frame - Safe Fail v. Success| 0.03  | -0.04     | 0.10     | 120000.00 | 1.00 |
| Covariation with Frame - Fall v. Success     | 0.02  | -0.05     | 0.09     | 120460.57 | 1.00 |
| Covariation with Frame - Wheelchair: Safe Fail v. Fall | 0.00 | -0.07 | 0.07 | 120000.00 | 1.00 |
| Covariation with Frame - Wheelchair: Safe Fail v. Success | -0.02 | -0.09 | 0.06 | 115543.57 | 1.00 |
| Covariation with Frame - Wheelchair: Fall v. Success | -0.02 | -0.09 | 0.06 | 95069.69 | 1.00 |
| Covariation with Frame - Rollerblades: Safe Fail v. Fall | 0.01 | -0.06 | 0.09 | 120000.00 | 1.00 |
| Covariation with Frame - Rollerblades: Safe Fail v. Success | 0.04 | -0.03 | 0.12 | 116502.96 | 1.00 |
| Covariation with Frame                  | n1  | n2  | r   | t    | p    |
|----------------------------------------|-----|-----|-----|------|------|
| Rollerblades: Fall v. Success          | 0.03| -0.04| 0.10| 100529.88| 1.00 |
| Safe Fail: Wheelchair v. Rollerblades  | -0.03| -0.09| 0.04| 116061.98| 1.00 |
| Fall: Wheelchair v. Rollerblades       | -0.02| -0.08| 0.05| 100399.15| 1.00 |
| Success: Wheelchair v. Rollerblades    | 0.03| -0.03| 0.10| 86269.22 | 1.00 |
C. Action Anticipation Model

Figure C.1: Goodness of fit
The figure shows a graphical representation of the posterior distributions resulting from the Hierarchical Bayesian Logit models (parts A and C) and the actual data of the experiment (parts B and D), for a comparison. The similarities between posterior distribution and actual data (A v. B and C v. D) indicate that the model perfectly fits with the data.

The posterior distribution values were transformed by means of the inverse logit function ($\Lambda^{-1}$) in order to have a direct comparison with the actual data. We used boxplots for the representation of the actual data. The darker line in the middle of the box indicates the median, the boundaries of the box represent the first and third quartile and the bottom and top whiskers represent the first quarter minus 1.5 * Interquartile Range and the third quarter plus 1.5 * Interquartile Range, respectively. The Points are data outside the whiskers. For representations of the posterior distribution we chose violin plots. The darker line in the middle of the box is the median, and the upper and lower boundaries of the box represent the first and third quartile. The curves are probability density curves represented along the y-axis instead of the x-axis, plotted on each side.

A = posterior distributions of 600-1200ms data; B = actual 600-1200 ms data; C = posterior distribution of 2400-3000ms data; D = actual 2400-3000 ms data.
Estimation of the Coefficients via Hierarchical Bayesian Logit Model with non-informative prior

The estimation of coefficients is done through a standard Hierarchical Bayesian Logit Model (Gelman & Hill, 2006; Kruschke, 2011, 2014). This model allows us to relate binomial dependent variables (accuracies, frequencies, etc...) to linear coefficients. This is possible by assuming a normal latent variable (an unobserved continuous variable underlying the non-parametric dependent variable, Agresti, 2012, p. 4). Therefore, it is possible to estimate coefficients for the independent variables from a conventional linear regression and transform its result (the normally distributed latent variables) into a binomial dependent variable (the data) via a “link-function”, that in this case is the Logit function.

The Logit function in its canonical form is \( \text{Logit}(x) = \frac{1}{1 + e^{-x}} \).

The inverse of the Logit function transforms the [0÷1] probability of getting correct responses into a continuous variable, that is the latent variable, which is then used to estimate the coefficients \( \beta \) s.

As to the Bayesian Logit Model, we are interested in the posterior distributions of the \( \mu \) parameter of the \( \beta \) coefficients, i.e. the parameter of central tendency for each independent variable. These posterior distributions are then used to compute the contrasts of interest that are reported in the paper in terms of Mode and 89% HPDI.

The mathematical description of the Hierarchical Bayesian Logit Model is reported in Table A.1, and the corresponding JAGS code (the script for the Bayesian analysis) is reported in Code A.1.

Table C.1: Hierarchical Bayesian Logit Model for the Binomial data
In the first column the formula for each term of the model. In the second column, the corresponding row in the JAGS code (see below). In the third column a short description for each term.

\( y_i \) is the dependent variable (i.e. the number of correct responses in the \( i^{th} \) case).
$N_i$ is the number of trials in the $i^{th}$ case.

`length_i` is the covariate in the $i^{th}$ case: the duration of the video centred and re-scaled in the [-1; 1] range.

**Subscripts of $\beta$s**: G = “Group” (ROL, PHY, SKA); E = “Ending” (Fall, Safe fail, Success); T = “Tool” (Rollerblade, Wheelchair); L = “Length” (a covariate from 600 to 1800ms in the first application of the model, from 2400 to 3000ms in the second one. In both cases it was centred and re-scaled in the [-1; 1] range); S = “Subject”.

| Formula | Rows in the JAGS code | Description |
|---------|-----------------------|-------------|
| $y_i \sim \text{Binomial}(\mu_i N_i)$ | 4 | Likelihood |
| $\mu = \text{Logit}[\alpha + \beta_G + \beta_T + \beta_{G:E} + \beta_{G:L} + length_i (\beta_L + \beta_{G:L} + \beta_{G:L:T} + \beta_{G:L:T:E}) + \beta_{G:L:E:T:L}] + \beta_{G:L:E:T:L}$ | 6-12 | Logit-linear model |
| $\alpha \sim \text{Normal}(0, 0.001)$ | 69 | Prior for $\alpha$ |
| $\beta_G \sim \text{Normal}(0, \sigma_G^2)$ | 59 | Prior for $\beta_G$ |
| $\beta_T \sim \text{Normal}(0, \sigma_T^2)$ | 49 | Prior for $\beta_T$ |
| $\beta_L \sim \text{Normal}(0, \sigma_L^2)$ | 54 | Prior for $\beta_L$ |
| $\beta_{G:E} \sim \text{Normal}(0, \sigma_{G:E}^2)$ | 67 | Prior for $\beta_{G:E}$ |
| $\beta_{G:L} \sim \text{Normal}(0, \sigma_{G:L}^2)$ | 36 | Prior for $\beta_{G:L}$ |
| $\beta_{G:E:L} \sim \text{Normal}(0, \sigma_{G:E:L}^2)$ | 43 | Prior for $\beta_{G:E:L}$ |
| $\beta_{G:E:T:L} \sim \text{Normal}(0, \sigma_{G:E:T:L}^2)$ | 60 | Prior for $\beta_{G:E:T:L}$ |
| $\beta_{G:L:E:T} \sim \text{Normal}(0, \sigma_{G:L:E:T}^2)$ | 29 | Prior for $\beta_{G:L:E:T}$ |
| $\beta_{G:E:T} \sim \text{Normal}(0, \sigma_{G:E:T}^2)$ | 55 | Prior for $\beta_{G:E:T}$ |
| $\beta_{G:E:T:L} \sim \text{Normal}(0, \sigma_{G:E:T:L}^2)$ | 37 | Prior for $\beta_{G:E:T:L}$ |
| $\beta_{G:E:T:L} \sim \text{Normal}(0, \sigma_{G:E:T:L}^2)$ | 21 | Prior for $\beta_{G:E:T:L}$ |
| $\beta_{G:L:E:T} \sim \text{Normal}(0, \sigma_{G:L:E:T}^2)$ | 44 | Prior for $\beta_{G:L:E:T}$ |
| $\beta_{G:L:E:T} \sim \text{Normal}(0, \sigma_{G:L:E:T}^2)$ | 30 | Prior for $\beta_{G:L:E:T}$ |
| $\beta_{G:E:T} \sim \text{Normal}(0, \sigma_{G:E:T}^2)$ | 22 | Prior for $\beta_{G:E:T}$ |
| $\beta_{G:E:T:L} \sim \text{Normal}(0, \sigma_{G:E:T:L}^2)$ | 64 | Prior for $\beta_{G:E:T:L}$ |
| $\sigma^2_\epsilon \sim \text{Uniform}(0.01, 100)$ | 81-89 | Hyperpriors. Priors for all the $\sigma^2_\epsilon$ |

**Code C.1: JAGS code for the Hierarchical Bayesian Model for the non-informative prior for the Logit Models**

The JAGS code concerning the Bayesian model whose mathematical description is in Table A is reported below.

```jags
model {
  ## Likelihood
  for(iin1:Ntotal){
    y[i]~dbin(mu[i], N[i])
  }

  ## Logit
  logit(mu[i])<-alpha+B_g[g[i]]+B_e[e[i]]+
    B_t[t[i]]+B_te[t[i],e[i]]+B_gt[g[i],t[i]]+
    B_ge[g[i],e[i]]+B_gte[g[i],t[i],e[i]]+
    length[i]*B_l+B_g[l[i]]+B_tel[t[i],e[i]]+
    B_gtl[g[i],t[i]]+B_gel[g[i],e[i]]+
    B Gael[e[i]]+B tel[t[i]]+B_gtel[g[i],t[i],e[i]]+
    B_s[sub[i]]}

  ## Priors
}
```
for (i in : ngroup) {
    for (it in : ntool) {
        for (ie in : nending) {
            B_gte[ig, it, ie] ~ dnorm(0.0, 1/pow(GTE_Sigma, 2))
            B_gtel[ig, it, ie] ~ dnorm(0.0, 1/pow(length_Sigma, 2))
        }
    }
}
for (it in : ntool) {
    for (ie in : nending) {
        B_te[it, ie] ~ dnorm(0.0, 1/pow(TE_Sigma, 2))
        B_tel[it, ie] ~ dnorm(0.0, 1/pow(length_Sigma, 2))
    }
}
for (i in : ngroup) {
    for (ie in : nending) {
        B_ge[ig, ie] ~ dnorm(0.0, 1/pow(GE_Sigma, 2))
        B_gel[ig, ie] ~ dnorm(0.0, 1/pow(length_Sigma, 2))
    }
}
for (i in : ngroup) {
    for (it in : ntool) {
        for (ie in : nending) {
            B_gt[ig, it] ~ dnorm(0.0, 1/pow(GT_Sigma, 2))
            B_gtl[ig, it] ~ dnorm(0.0, 1/pow(length_Sigma, 2))
        }
    }
}
for (i in : nending) {
    B_e[i] ~ dnorm(0.0, 1/pow(ending_Sigma, 2))
    B_el[i] ~ dnorm(0.0, 1/pow(length_Sigma, 2))
}
for (it in : ntool) {
    for (ie in : nending) {
        B_t[it] ~ dnorm(0.0, 1/pow(tool_Sigma, 2))
        B_tl[it] ~ dnorm(0.0, 1/pow(length_Sigma, 2))
    }
}
for (i in : ngroup) {
    for (i in : nsubject) {
        B_s[i] ~ dnorm(0.0, 1/pow(subj_Sigma, 2))
    }
}
B_l ~ dnorm(0.0, 1/pow(length_Sigma, 2))
alpha ~ dnorm(0.0, 0.001)

## Hyperpriors
GTE_Sigma ~ dunif(0.01, 100)
TE_Sigma ~ dunif(0.01, 100)
GE_Sigma ~ dunif(0.01, 100)
GT_Sigma ~ dunif(0.01, 100)
length_Sigma ~ dunif(0.01, 100)
ending_Sigma ~ dunif(0.01, 100)
tool_Sigma ~ dunif(0.01, 100)
group_Sigma ~ dunif(0.01, 100)
subj_Sigma ~ dunif(0.01, 100)

## Code for Sum-to-zero coefficients
## ...
D. Posterior distributions

In this section we report the mode, 89% HPDI, ESS and $\hat{R}$ for the coefficients from all the posterior distributions.

Table D.1 – Posterior distributions for the categorial factors for the Accuracies data for the 600-1800 ms Action Anticipation experiment

|                        | Mode   | HPDI   | ESS             | $\hat{R}$ |
|------------------------|--------|--------|-----------------|-----------|
| Intercept              | -0.533 | -0.601 | -0.465          | 109351.171| 1         |
| Group: SCI             | 0.030  | -0.061 | 0.126           | 109414.826| 1         |
| Group: PHY             | -0.039 | -0.134 | 0.053           | 110000.560| 1         |
| Group: SKA             | 0.010  | -0.084 | 0.104           | 109233.251| 1         |
| Video type: Rollerblade| 0.025  | -0.016 | 0.065           | 81439.493 | 1         |
| Video type: Wheelchair | -0.025 | -0.065 | 0.016           | 81439.493 | 1         |
| Video Ending: Safe Fail| 0.208  | 0.156  | 0.266           | 97084.871 | 1         |
| Video Ending: Fall     | -0.944 | -1.005 | -0.880          | 70731.674 | 1         |
| Video Ending: Success  | 0.733  | 0.676  | 0.787           | 98015.794 | 1         |
| SCI X Rollerblade      | -0.082 | -0.141 | -0.027          | 32855.421 | 1         |
| PHY X Rollerblade      | 0.012  | -0.040 | 0.065           | 97353.001 | 1         |
| SKA X Rollerblade      | 0.071  | 0.015  | 0.127           | 36629.740 | 1         |
| SCI X Wheelchair       | 0.082  | 0.027  | 0.141           | 32855.421 | 1         |
| PHY X Wheelchair       | -0.012 | -0.065 | 0.040           | 97353.001 | 1         |
| SKA X Wheelchair       | -0.071 | -0.127 | -0.015          | 36629.740 | 1         |
| SCI X Safe Fail        | -0.074 | -0.149 | 0.003           | 100927.145| 1         |
| PHY X Safe Fail        | 0.220  | 0.142  | 0.293           | 84789.323 | 1         |
| SKA X Safe Fail        | -0.144 | -0.222 | -0.070          | 93941.015 | 1         |
| SCI X Fall             | -0.039 | -0.130 | 0.040           | 76231.641 | 1         |
| PHY X Fall             | 0.133  | 0.047  | 0.216           | 68647.554 | 1         |
| SKA X Fall             | -0.092 | -0.174 | -0.003          | 72767.517 | 1         |
| SCI X Success          | 0.118  | 0.039  | 0.190           | 98287.586 | 1         |
| PHY X Success          | -0.358 | -0.429 | -0.272          | 53677.644 | 1         |
| SKA X Success          | 0.235  | 0.157  | 0.312           | 70679.723 | 1         |
| Rollerblade X Safe Fail| -0.027 | -0.081 | 0.024           | 69336.105 | 1         |
| Wheelchair X Safe Fail | 0.027  | -0.024 | 0.081           | 69336.105 | 1         |
| Rollerblade X Fall     | 0.083  | 0.023  | 0.150           | 22918.337 | 1         |
| Wheelchair X Fall      | -0.083 | -0.150 | -0.023          | 22918.337 | 1         |
| Rollerblade X Success  | -0.056 | -0.114 | -0.006          | 37812.616 | 1         |
| Wheelchair X Success   | 0.056  | 0.006  | 0.114           | 37812.616 | 1         |
| SCI X Rollerblade X Safe Fail| -0.008 | -0.102 | 0.021           | 13054.415 | 1         |
| Covariate | Mode | HPDI  | ESS     | $\hat{R}$ |
|-----------|------|-------|---------|----------|
| Length    | 0.031| -0.089| 0.158   | 123715.58| 1        |
| Video Ending: Safe Fail | -0.018| -0.152| 0.100   | 122798.79| 1        |
| Video Ending: Fall | 0.094| -0.028| 0.226   | 105777.37| 1        |
| Video Ending: Success | -0.045| -0.168| 0.084   | 122883.65| 1        |
| Video type: Rollerblade | 0.062| -0.063| 0.185   | 120107.65| 1        |
| Video type: Wheelchair | -0.024| -0.155| 0.095   | 125128.02| 1        |
| Group: SCI | -0.021| -0.152| 0.100   | 123100.23| 1        |
| Group: PHY | 0.050| -0.080| 0.171   | 117088.24| 1        |
| Group: SKA | 0.009| -0.116| 0.136   | 122706.58| 1        |
| Rollerblade X Safe Fail | 0.036| -0.087| 0.172   | 117735.72| 1        |
| Wheelchair X Safe Fail | -0.063| -0.197| 0.063   | 100900.54| 1        |
| Rollerblade X Fall | 0.016| -0.121| 0.143   | 112661.49| 1        |
| Wheelchair X Fall | 0.080| -0.046| 0.222   | 83188.55 | 1        |
| Rollerblade X Success | 0.006| -0.120| 0.137   | 122490.86| 1        |
| Wheelchair X Success | -0.044| -0.181| 0.078   | 113861.64| 1        |
| SCI X Rollerblade | 0.032| -0.099| 0.161   | 121148.69| 1        |

Table D.2 – Posterior distributions for the covariates for the Accuracies data for the 600-1800 ms Action Anticipation experiment.
| Factor | Mode  | HPDI | ESS    | \( \hat{R} \) |
|--------|-------|------|--------|-------------|
| Intercept | 3.161 | 2.885 | 3.447 | 20781.35 | 1 |
| Group: SCI | -0.519 | -0.878 | -0.156 | 26123.32 | 1 |

**Table D.3** – Posterior distributions for the categorial factors for the Accuracies data for the 2400-3000 ms Action Anticipation experiment.
| Group: PHY | 0.202 | -0.142 | 0.559 | 50356.51 | 1 |
| Group: SKA | 0.310 | -0.048 | 0.684 | 32853.46 | 1 |
| Video type: Rollerblade | 0.916 | 0.760 | 1.111 | 11081.20 | 1 |
| Video type: Wheelchair | -0.916 | -1.111 | -0.760 | 11081.20 | 1 |
| Video Ending: Safe Fail | -0.229 | -0.453 | 0.003 | 15329.34 | 1 |
| Video Ending: Fall | 0.296 | 0.064 | 0.555 | 14625.69 | 1 |
| Video Ending: Success | -0.082 | -0.289 | 0.126 | 15607.00 | 1 |
| SCI X Rollerblade | -0.264 | -0.466 | -0.079 | 13715.23 | 1 |
| PHY X Rollerblade | 0.122 | -0.064 | 0.333 | 22066.75 | 1 |
| SKA X Rollerblade | 0.124 | -0.075 | 0.355 | 19003.90 | 1 |
| SCI X Wheelchair | 0.264 | 0.079 | 0.466 | 13715.23 | 1 |
| PHY X Wheelchair | -0.122 | -0.333 | 0.064 | 22066.75 | 1 |
| SKA X Wheelchair | -0.124 | -0.355 | 0.075 | 19003.90 | 1 |
| SCI X Safe Fail | -0.174 | -0.426 | 0.051 | 19747.32 | 1 |
| PHY X Safe Fail | 0.136 | -0.095 | 0.422 | 24563.21 | 1 |
| SKA X Safe Fail | 0.018 | -0.240 | 0.289 | 29411.16 | 1 |
| SCI X Fall | -0.091 | -0.321 | 0.150 | 32715.13 | 1 |
| PHY X Fall | 0.118 | -0.124 | 0.381 | 34580.56 | 1 |
| SKA X Fall | -0.051 | -0.318 | 0.227 | 30284.00 | 1 |
| SCI X Success | 0.262 | 0.038 | 0.505 | 19124.96 | 1 |
| PHY X Success | -0.283 | -0.535 | -0.050 | 26142.26 | 1 |
| SKA X Success | 0.025 | -0.232 | 0.281 | 29468.52 | 1 |
| Rollerblade X Safe Fail | 0.769 | 0.551 | 1.001 | 15585.11 | 1 |
| Wheelchair X Safe Fail | -0.769 | -1.001 | -0.551 | 15585.11 | 1 |
| Rollerblade X Fall | 0.516 | 0.295 | 0.762 | 15525.82 | 1 |
| Wheelchair X Fall | -0.516 | -0.762 | -0.295 | 15525.82 | 1 |
| Rollerblade X Success | -1.306 | -1.516 | -1.100 | 14201.79 | 1 |
| Wheelchair X Success | 1.306 | 1.100 | 1.516 | 14201.79 | 1 |
| SCI X Rollerblade X Safe Fail | -0.385 | -0.654 | -0.142 | 15377.89 | 1 |
| PHY X Rollerblade X Safe Fail | 0.227 | -0.002 | 0.491 | 24456.30 | 1 |
| SKA X Rollerblade X Safe Fail | 0.133 | -0.092 | 0.404 | 29107.83 | 1 |
| SCI X Wheelchair X Safe Fail | 0.385 | 0.142 | 0.654 | 15377.89 | 1 |
| PHY X Wheelchair X Safe Fail | -0.227 | -0.491 | 0.002 | 24456.30 | 1 |
| SKA X Wheelchair X Safe Fail | -0.133 | -0.404 | 0.092 | 29107.83 | 1 |
| SCI X Rollerblade X Fall | 0.050 | -0.152 | 0.272 | 39306.53 | 1 |
| PHY X Rollerblade X Fall | -0.164 | -0.413 | 0.057 | 31176.63 | 1 |
| SKA X Rollerblade X Fall | 0.108 | -0.123 | 0.373 | 30960.36 | 1 |
| SCI X Wheelchair X Fall | -0.050 | -0.272 | 0.152 | 39306.53 | 1 |
| PHY X Wheelchair X Fall | 0.164 | -0.057 | 0.413 | 31176.63 | 1 |
| Term                                      | Mode   | HPDI  | ESS    | $\hat{R}$ |
|------------------------------------------|--------|-------|--------|-----------|
| Length                                   | 0.460  | 0.042 | 0.887  | 238640.25 |
| Video Ending: Safe Fail                  | 0.148  | -0.282| 0.576  | 201923.55 |
| Video Ending: Fall                       | 0.269  | -0.150| 0.717  | 128925.21 |
| Video Ending: Success                    | 0.030  | -0.394| 0.460  | 236772.88 |
| Video type: Rollerblade                  | 0.171  | -0.249| 0.617  | 125548.60 |
| Video type: Wheelchair                   | 0.290  | -0.149| 0.699  | 241379.08 |
| Group: SCI                               | 0.042  | -0.390| 0.461  | 261195.23 |
| Group: PHY                               | 0.185  | -0.239| 0.619  | 212193.11 |
| Group: SKA                               | 0.236  | -0.193| 0.671  | 161237.07 |
| Rollerblade X Safe Fail                  | -0.097 | -0.557| 0.352  | 98803.78  |
| Wheelchair X Safe Fail                   | 0.232  | -0.185| 0.683  | 207366.23 |
| Rollerblade X Fall                       | 0.121  | -0.313| 0.623  | 60987.51  |
| Wheelchair X Fall                        | 0.142  | -0.306| 0.572  | 161300.85 |
| Rollerblade X Success                    | 0.145  | -0.310| 0.572  | 153604.87 |
| Wheelchair X Success                     | -0.093 | -0.538| 0.336  | 203074.29 |
| SCI X Rollerblade                        | -0.163 | -0.594| 0.284  | 151045.36 |
| PHY X Rollerblade                        | 0.220  | -0.234| 0.667  | 113009.95 |
| SKA X Rollerblade                        | 0.111  | -0.335| 0.582  | 84309.95  |
| SCI X Wheelchair                         | 0.189  | -0.230| 0.633  | 253022.15 |
| PHY X Wheelchair                         | -0.022 | -0.461| 0.409  | 218550.08 |
| SKA X Wheelchair                         | 0.115  | -0.315| 0.562  | 177347.46 |
| SCI X Safe Fail                          | 0.020  | -0.438| 0.433  | 240903.74 |
| PHY X Safe Fail                          | 0.126  | -0.299| 0.594  | 169284.45 |
| SKA X Safe Fail                          | 0.016  | -0.454| 0.443  | 158542.83 |
| SCI X Fall                               | 0.090  | -0.330| 0.555  | 212325.55 |
| PHY X Fall                               | 0.006  | -0.413| 0.485  | 166676.13 |
| SKA X Fall                               | 0.128  | -0.306| 0.604  | 129641.43 |

Table D.4 – Posterior distributions for the covariates for the Accuracies data for the 2400-3000 ms Action Anticipation experiment
Table D.5 – Posterior distributions for the Emotional Valence of the Stimuli data

|                                | Mode   | HPDI    | ESS    | \(\hat{R}\) |
|--------------------------------|--------|---------|--------|-------------|
| Intercept                      | 19.952 | 14.563  | 25.599 | 125000.00   | 1          |
| Emotion: Negative              | -2.255 | -2.902  | -1.646 | 125000.00   | 1          |
| Emotion: Neutral               | 2.255  | 1.646   | 2.902  | 125000.00   | 1          |
| Video type: Rollerblades       | -1.600 | -2.214  | -0.952 | 120086.82   | 1          |
| Video type: Wheelchair         | 1.600  | 0.952   | 2.214  | 120086.82   | 1          |
| Video Ending: Safe Fail        | -0.560 | -1.453  | 0.326  | 125000.00   | 1          |
| Video Ending: Fall             | 6.323  | 5.385   | 7.176  | 122451.89   | 1          |
| Video Ending: Success          | -5.709 | -6.642  | -4.858 | 115598.50   | 1          |
| Negative X Rollerblades        | -0.536 | -1.161  | 0.075  | 39802.35    | 1          |
| Neutral X Rollerblades         | 0.536  | -0.075  | 1.161  | 39802.35    | 1          |
| Negative X Wheelchair          | 0.536  | -0.075  | 1.161  | 39802.35    | 1          |
| Neutral X Wheelchair           | -0.536 | -1.161  | 0.075  | 39802.35    | 1          |
| Negative X Safe Fail           | 0.831  | -0.004  | 1.733  | 118276.68   | 1          |
| Neutral X Safe Fail            | -0.831 | -1.733  | 0.004  | 118276.68   | 1          |
| Condition                          | Mode  | HPDI  | ESS          | $\hat{R}$ |
|-----------------------------------|-------|-------|--------------|----------|
| Intercept                         | 69.572| 60.896| 78.133       | 115103.25| 1      |
| Video type: Wheelchair            | 15.248| 7.363 | 24.614       | 81404.18 | 1      |
| Video type: Rollerblades          | -15.248| -24.614| -7.363        | 81404.18 | 1      |
| Video Ending: Safe Fail           | -4.805| -16.037| 6.855         | 99414.94 | 1      |
| Video Ending: Fall                | -13.000| -25.502| -1.745        | 58809.56 | 1      |
| Video Ending: Success             | 18.244| 5.564 | 30.308       | 44415.20 | 1      |
| Wheelchair X Safe Fail            | 0.013 | -10.220| 8.277         | 104240.62| 1      |
| Rollerblades X Safe Fail          | -0.013| -8.277 | 10.220        | 104240.62| 1      |
| Wheelchair X Fall                 | -0.251| -16.127| 3.619         | 14372.63 | 1      |
| Rollerblades X Fall               | 0.251 | -3.619 | 16.127        | 14372.63 | 1      |
| Wheelchair X Success              | 0.218 | -2.879 | 17.426        | 11752.04 | 1      |
| Rollerblades X Success            | -0.218| -17.426| 2.879         | 11752.04 | 1      |

Table D.6 – Posterior distributions for the Kinematic data analyses
| Video type: Rollerblades | 0.020 | -0.039 | 0.085 | 121039.2 | 1 |
| Video Ending: Safe Fail | 0.007 | -0.056 | 0.068 | 119383.7 | 1 |
| Video Ending: Fall | 0.026 | -0.037 | 0.087 | 116399.6 | 1 |
| Video Ending: Success | 0.037 | -0.027 | 0.097 | 118432.0 | 1 |
| Wheelchair X Safe Fail | 0.003 | -0.060 | 0.065 | 120000.0 | 1 |
| Rollerblades X Safe Fail | 0.032 | -0.030 | 0.094 | 118694.1 | 1 |
| Wheelchair X Fall | 0.003 | -0.059 | 0.066 | 115967.3 | 1 |
| Rollerblades X Fall | 0.021 | -0.042 | 0.083 | 116589.8 | 1 |
| Wheelchair X Success | 0.021 | -0.042 | 0.084 | 114091.3 | 1 |
| Rollerblades X Success | -0.013 | -0.075 | 0.049 | 115114.8 | 1 |

### Right Elbow Angle

| Intercept | 1.719 | 1.648 | 1.796 | 120000.0 | 1 |
| Video type: Wheelchair | -0.137 | -0.214 | -0.067 | 104118.8 | 1 |
| Video type: Rollerblades | 0.137 | 0.067 | 0.214 | 104118.8 | 1 |
| Video Ending: Safe Fail | -0.202 | -0.305 | -0.096 | 78182.55 | 1 |
| Video Ending: Fall | 0.001 | -0.102 | 0.101 | 120000.0 | 1 |
| Video Ending: Success | 0.203 | 0.096 | 0.306 | 77311.55 | 1 |
| Wheelchair X Safe Fail | 0.130 | 0.020 | 0.240 | 19496.42 | 1 |
| Rollerblades X Safe Fail | -0.130 | -0.240 | -0.020 | 19496.42 | 1 |
| Wheelchair X Fall | -0.017 | -0.119 | 0.068 | 104581.18 | 1 |
| Rollerblades X Fall | 0.017 | -0.068 | 0.119 | 104581.18 | 1 |
| Wheelchair X Success | -0.100 | -0.204 | 0.001 | 25499.04 | 1 |
| Rollerblades X Success | 0.100 | -0.001 | 0.204 | 25499.04 | 1 |

### Right Elbow Angle – covariation with Frame

| Frame | 0.000 | -0.014 | 0.014 | 120000.0 | 1 |
| Video type: Wheelchair | 0.000 | -0.014 | 0.014 | 118581.9 | 1 |
| Video type: Rollerblades | 0.000 | -0.014 | 0.014 | 120000.0 | 1 |
| Video Ending: Safe Fail | 0.001 | -0.014 | 0.014 | 120000.0 | 1 |
| Video Ending: Fall | 0.000 | -0.014 | 0.014 | 120000.0 | 1 |
| Video Ending: Success | 0.001 | -0.014 | 0.014 | 118604.9 | 1 |
| Wheelchair X Safe Fail | 0.000 | -0.014 | 0.014 | 120000.0 | 1 |
| Rollerblades X Safe Fail | 0.000 | -0.014 | 0.014 | 120000.0 | 1 |
| Wheelchair X Fall | 0.001 | -0.014 | 0.014 | 121288.4 | 1 |
| Rollerblades X Fall | -0.001 | -0.014 | 0.014 | 120000.0 | 1 |
| Wheelchair X Success | -0.001 | -0.014 | 0.014 | 120000.0 | 1 |
| Rollerblades X Success | 0.000 | -0.014 | 0.014 | 120638.2 | 1 |

### Left Knee Angle

| Intercept | 0.233 | 0.193 | 0.267 | 126032.87 | 1 |
| Video type: Wheelchair | -0.145 | -0.181 | -0.107 | 116248.11 | 1 |
| Video type: Rollerblades | 0.145 | 0.107 | 0.181 | 116248.11 | 1 |
| Video Ending: Safe Fail | 0.016 | -0.026 | 0.067 | 76668.45 | 1 |
| Video Ending: Fall | -0.008 | -0.054 | 0.037 | 113172.79 | 1 |
| Video Ending: Success | -0.007 | -0.057 | 0.035 | 103192.81 | 1 |
| Wheelchair X Safe Fail | 0.003 | -0.027 | 0.043 | 57465.41 | 1 |
| Rollerblades X Safe Fail | -0.003 | -0.043 | 0.027 | 57465.41 | 1 |
| Wheelchair X Fall | -0.001 | -0.038 | 0.030 | 94989.92 | 1 |
| Rollerblades X Fall | 0.001 | -0.030 | 0.038 | 94989.92 | 1 |
| Wheelchair X Success | -0.001 | -0.038 | 0.031 | 97966.86 | 1 |
|                |        |        |          |            |     |
|----------------|--------|--------|----------|------------|-----|
| **Rollerblades X Success** | 0.001  | -0.031 | 0.038    | 97966.86   | 1   |
| **Left Knee Angle – covariation with Frame** |        |        |          |            |     |
| Frame          | 0.000  | -0.014 | 0.014    | 122638.1   | 1   |
| Video type: Wheelchair | 0.000  | -0.014 | 0.014    | 120000.0   | 1   |
| Video type: Rollerblades | 0.000  | -0.014 | 0.015    | 120000.0   | 1   |
| Video Ending: Safe Fail | 0.000  | -0.014 | 0.014    | 118651.4   | 1   |
| Video Ending: Fall | 0.000  | -0.014 | 0.015    | 120000.0   | 1   |
| Video Ending: Success | 0.001  | -0.014 | 0.014    | 120000.0   | 1   |
| Wheelchair X Safe Fail | 0.000  | -0.014 | 0.015    | 120000.0   | 1   |
| Rollerblades X Safe Fail | 0.001  | -0.014 | 0.014    | 120000.0   | 1   |
| Wheelchair X Fall | 0.000  | -0.014 | 0.014    | 121615.8   | 1   |
| Rollerblades X Fall | -0.001 | -0.014 | 0.014    | 120000.0   | 1   |
| Wheelchair X Success | 0.001  | -0.014 | 0.014    | 120000.0   | 1   |
| Rollerblades X Success | 0.000  | -0.014 | 0.014    | 122227.8   | 1   |

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