Approach 1:

**Quantity**

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: Quantity ~ Day + Condition + Gender + Grip\_Strength\_kg + MRT\_Percent\_Correct +

Fitts\_movement\_time\_avg\_ms + (1 | Participant\_Number)

Data: df\_no\_NA

REML criterion at convergence: 1566.4

Scaled residuals:

Min 1Q Median 3Q Max

-2.9198 -0.6837 -0.0656 0.6600 3.8949

Random effects:

Groups Name Variance Std.Dev.

Participant\_Number (Intercept) 0.1230 0.3507

Residual 0.6866 0.8286

Number of obs: 599, groups: Participant\_Number, 45

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -4.352e-01 5.832e-01 4.050e+01 -0.746 0.4598

Day 1.713e-01 2.435e-02 5.557e+02 7.036 5.86e-12 \*\*\*

ConditionChild -4.549e-01 2.443e-01 3.991e+01 -1.862 0.0700 .

GenderMale 1.428e-01 1.592e-01 3.812e+01 0.897 0.3754

GenderNB 4.924e-01 4.304e-01 3.804e+01 1.144 0.2598

Grip\_Strength\_kg -6.855e-03 9.261e-03 3.660e+01 -0.740 0.4639

MRT\_Percent\_Correct 7.194e-03 4.649e-03 3.931e+01 1.548 0.1297

Fitts\_movement\_time\_avg\_ms -4.092e-04 2.279e-04 4.141e+01 -1.795 0.0799 .

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) Day CndtnC GndrMl GndrNB Grp\_S\_ MRT\_P\_

Day -0.124

ConditnChld -0.529 -0.003

GenderMale 0.193 0.011 -0.430

GenderNB 0.038 -0.009 -0.038 0.115

Grp\_Strngt\_ -0.428 -0.007 0.459 -0.489 -0.069

MRT\_Prcnt\_C -0.799 0.001 0.482 -0.005 -0.052 -0.071

Ftts\_mvm\_\_\_ -0.659 -0.007 -0.101 -0.144 -0.005 0.193 0.357

**Quality**:

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: Quality ~ Day + Condition + Gender + Grip\_Strength\_kg + MRT\_Percent\_Correct +

Fitts\_movement\_time\_avg\_ms + (1 | Participant\_Number)

Data: df\_no\_NA

REML criterion at convergence: 1652.9

Scaled residuals:

Min 1Q Median 3Q Max

-3.1860 -0.6837 -0.1034 0.5663 3.7388

Random effects:

Groups Name Variance Std.Dev.

Participant\_Number (Intercept) 0.1024 0.3200

Residual 0.8068 0.8982

Number of obs: 599, groups: Participant\_Number, 45

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 5.645e-01 5.661e-01 4.348e+01 0.997 0.32423

Day -7.484e-02 2.638e-02 5.582e+02 -2.837 0.00472 \*\*

ConditionChild -5.256e-01 2.370e-01 4.269e+01 -2.218 0.03194 \*

GenderMale 3.595e-01 1.540e-01 4.034e+01 2.335 0.02461 \*

GenderNB -3.810e-01 4.162e-01 4.033e+01 -0.915 0.36545

Grip\_Strength\_kg 5.285e-03 8.934e-03 3.838e+01 0.592 0.55759

MRT\_Percent\_Correct -2.050e-03 4.505e-03 4.189e+01 -0.455 0.65133

Fitts\_movement\_time\_avg\_ms -2.761e-04 2.216e-04 4.468e+01 -1.246 0.21922

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) Day CndtnC GndrMl GndrNB Grp\_S\_ MRT\_P\_

Day -0.138

ConditnChld -0.526 -0.004

GenderMale 0.193 0.012 -0.431

GenderNB 0.038 -0.010 -0.038 0.116

Grp\_Strngt\_ -0.427 -0.008 0.458 -0.490 -0.069

MRT\_Prcnt\_C -0.798 0.001 0.484 -0.007 -0.052 -0.070

Ftts\_mvm\_\_\_ -0.658 -0.007 -0.103 -0.144 -0.005 0.194 0.355

**Economy**

Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']

Formula: Economy ~ Day + Condition + Gender + Grip\_Strength\_kg + MRT\_Percent\_Correct +

Fitts\_movement\_time\_avg\_ms + (1 | Participant\_Number)

Data: df\_no\_NA

REML criterion at convergence: 1517.6

Scaled residuals:

Min 1Q Median 3Q Max

-2.6003 -0.6072 0.0164 0.5704 3.7167

Random effects:

Groups Name Variance Std.Dev.

Participant\_Number (Intercept) 0.1562 0.3953

Residual 0.6222 0.7888

Number of obs: 599, groups: Participant\_Number, 45

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -6.609e-01 6.262e-01 4.032e+01 -1.055 0.297491

Day -6.914e-02 2.318e-02 5.554e+02 -2.982 0.002987 \*\*

ConditionChild 1.086e+00 2.626e-01 3.985e+01 4.135 0.000178 \*\*\*

GenderMale -2.480e-01 1.715e-01 3.845e+01 -1.446 0.156313

GenderNB -5.014e-02 4.637e-01 3.833e+01 -0.108 0.914457

Grip\_Strength\_kg 1.074e-02 1.000e-02 3.722e+01 1.074 0.289616

MRT\_Percent\_Correct 8.804e-04 5.000e-03 3.939e+01 0.176 0.861125

Fitts\_movement\_time\_avg\_ms 2.563e-04 2.444e-04 4.104e+01 1.048 0.300550

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Correlation of Fixed Effects:

(Intr) Day CndtnC GndrMl GndrNB Grp\_S\_ MRT\_P\_

Day -0.110

ConditnChld -0.531 -0.003

GenderMale 0.193 0.009 -0.429

GenderNB 0.038 -0.008 -0.037 0.115

Grp\_Strngt\_ -0.429 -0.006 0.461 -0.488 -0.069

MRT\_Prcnt\_C -0.799 0.001 0.480 -0.003 -0.052 -0.073

Ftts\_mvm\_\_\_ -0.661 -0.006 -0.099 -0.145 -0.006 0.193 0.359

Approach 2

**Quality**

df AIC

modelquality2 6 1638.063

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 0.06048 0.08388 41.47167 0.721 0.47494

ConditionChild -0.67398 0.13768 44.52049 -4.895 1.33e-05 \*\*\*

GenderMale 0.39784 0.13238 42.77704 3.005 0.00442 \*\*

GenderNB -0.36788 0.40942 43.15250 -0.899 0.37388

modelquality1 4 1648.391

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 0.22001 0.10908 194.71185 2.017 0.04507 \*

Day -0.07609 0.02641 556.25237 -2.881 0.00412 \*\*

modelquality3 6 1672.946

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -0.2766104 0.5044799 45.4197274 -0.548 0.5862

Grip\_Strength\_kg 0.0185817 0.0078864 41.6090187 2.356 0.0233 \*

MRT\_Percent\_Correct 0.0009243 0.0040498 43.6987269 0.228 0.8205

Fitts\_movement\_time\_avg\_ms -0.0002565 0.0002290 46.9525806 -1.120 0.2683

model2 10 1672.950

Quantity

df AIC

modelquantity1 4 1574.155

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 0.22001 0.10908 194.71185 2.017 0.04507 \*

Day -0.07609 0.02641 556.25237 -2.881 0.00412 \*\*

model1 10 1586.361

modelquantity2 6 1596.824

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 0.06048 0.08388 41.47167 0.721 0.47494

ConditionChild -0.67398 0.13768 44.52049 -4.895 1.33e-05 \*\*\*

GenderMale 0.39784 0.13238 42.77704 3.005 0.00442 \*\*

GenderNB -0.36788 0.40942 43.15250 -0.899 0.37388

modelquantity3 6 1621.972

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -0.2766104 0.5044799 45.4197274 -0.548 0.5862

Grip\_Strength\_kg 0.0185817 0.0078864 41.6090187 2.356 0.0233 \*

MRT\_Percent\_Correct 0.0009243 0.0040498 43.6987269 0.228 0.8205

Fitts\_movement\_time\_avg\_ms -0.0002565 0.0002290 46.9525806 -1.120 0.2683

Economy

df AIC

modelEconomy2 6 1503.402

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) -0.29945 0.09409 40.75421 -3.182 0.00279 \*\*

ConditionChild 1.00958 0.15338 42.65034 6.582 5.39e-08 \*\*\*

GenderMale -0.14762 0.14804 41.60514 -0.997 0.32446

GenderNB -0.03233 0.45758 41.68276 -0.071 0.94402

modelEconomy1 4 1526.372

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 0.20318 0.11788 104.80958 1.724 0.08774 .

Day -0.06844 0.02320 553.95709 -2.950 0.00331 \*\*

model3 10 1537.553

modelEconomy3 6 1545.420

Fixed effects:

Estimate Std. Error df t value Pr(>|t|)

(Intercept) 0.5289605 0.6084382 42.2332396 0.869 0.3896

Grip\_Strength\_kg -0.0074090 0.0096123 40.2979199 -0.771 0.4453

MRT\_Percent\_Correct -0.0094717 0.0049071 41.3496477 -1.930 0.0605 .

Fitts\_movement\_time\_avg\_ms 0.0003663 0.0002751 43.0256482 1.332 0.1899