# Resultados

# Mixed Model

Model Info

| Info | |
|---|---|
| Estimate | Linear mixed model fit by REML |
| Call | mediana ~ 1 + angulo + lados + angulo:lados+( 1 \| sujeto ) |
| AIC | -1740.838 |
| BIC | -1450.718 |
| LogLikel. | 806.857 |
| R-squared Marginal | 0.870 |
| R-squared Conditional | 0.886 |
| Converged | yes |
| Optimizer | bobyqa |

**[3]**

## Model Results

Fixed Effect Omnibus tests

| | F | Num df | Den df | p |
|---|---|---|---|---|
| angulo | 360.0 | 5 | 483 | < .001 |
| lados | 22.4 | 3 | 483 | < .001 |
| angulo ✻ lados | 142.6 | 15 | 483 | < .001 |

*Nota.* Satterthwaite method for degrees of freedom

Fixed Effects Parameter Estimates

| Names | Effect | Estimate | SE | 95% Confidence Interval | | df | t | p |
|---|---|---|---|---|---|---|---|---|
| | | | | Lower | Upper | | | |
| (Intercept) | (Intercept) | 0.10624 | 0.00392 | 0.09855 | 0.11393 | 21.0 | 27.069 | < .001 |
| angulo1 | hip_addu - ankle | -0.07002 | 0.00663 | -0.08303 | -0.05702 | 483.0 | -10.554 | < .001 |
| angulo2 | hip_flex - ankle | 0.08871 | 0.00663 | 0.07571 | 0.10172 | 483.0 | 13.371 | < .001 |
| angulo3 | hip_rot - ankle | -0.04876 | 0.00663 | -0.06176 | -0.03575 | 483.0 | -7.349 | < .001 |
| angulo4 | knee - ankle | 0.14925 | 0.00663 | 0.13625 | 0.16226 | 483.0 | 22.496 | < .001 |
| angulo5 | subt - ankle | -0.05387 | 0.00663 | -0.06687 | -0.04086 | 483.0 | -8.119 | < .001 |
| lados1 | L-R - L-L | -0.02437 | 0.00542 | -0.03499 | -0.01376 | 483.0 | -4.499 | < .001 |
| lados2 | R-L - L-L | -0.01964 | 0.00542 | -0.03026 | -0.00902 | 483.0 | -3.625 | < .001 |
| lados3 | R-R - L-L | 0.01483 | 0.00542 | 0.00421 | 0.02544 | 483.0 | 2.737 | 0.006 |
| angulo1 ✻ lados1 | hip_addu - ankle ✻ L-R - L-L | -0.16735 | 0.01877 | -0.20413 | -0.13057 | 483.0 | -8.918 | < .001 |
| angulo2 ✻ lados1 | hip_flex - ankle ✻ L-R - L-L | -0.02516 | 0.01877 | -0.06194 | 0.01162 | 483.0 | -1.341 | 0.181 |
| angulo3 ✻ lados1 | hip_rot - ankle ✻ L-R - L-L | -0.18485 | 0.01877 | -0.22163 | -0.14807 | 483.0 | -9.850 | < .001 |
| angulo4 ✻ lados1 | knee - ankle ✻ L-R - L-L | -0.52132 | 0.01877 | -0.55810 | -0.48454 | 483.0 | -27.780 | < .001 |
| angulo5 ✻ lados1 | subt - ankle ✻ L-R - L-L | -0.12970 | 0.01877 | -0.16648 | -0.09292 | 483.0 | -6.911 | < .001 |
| angulo1 ✻ lados2 | hip_addu - ankle ✻ R-L - L-L | -0.17986 | 0.01877 | -0.21664 | -0.14308 | 483.0 | -9.584 | < .001 |
| angulo2 ✻ lados2 | hip_flex - ankle ✻ R-L - L-L | -0.00820 | 0.01877 | -0.04498 | 0.02858 | 483.0 | -0.437 | 0.662 |
| angulo3 ✻ lados2 | hip_rot - ankle ✻ R-L - L-L | -0.20506 | 0.01877 | -0.24184 | -0.16828 | 483.0 | -10.927 | < .001 |
| angulo4 ✻ lados2 | knee - ankle ✻ R-L - L-L | -0.51404 | 0.01877 | -0.55082 | -0.47726 | 483.0 | -27.392 | < .001 |
| angulo5 ✻ lados2 | subt - ankle ✻ R-L - L-L | -0.15828 | 0.01877 | -0.19507 | -0.12150 | 483.0 | -8.435 | < .001 |
| angulo1 ✻ lados3 | hip_addu - ankle ✻ R-R - L-L | -0.01137 | 0.01877 | -0.04815 | 0.02541 | 483.0 | -0.606 | 0.545 |
| angulo2 ✻ lados3 | hip_flex - ankle ✻ R-R - L-L | -0.00452 | 0.01877 | -0.04130 | 0.03226 | 483.0 | -0.241 | 0.810 |
| angulo3 ✻ lados3 | hip_rot - ankle ✻ R-R - L-L | 0.01516 | 0.01877 | -0.02162 | 0.05194 | 483.0 | 0.808 | 0.420 |
| angulo4 ✻ lados3 | knee - ankle ✻ R-R - L-L | 0.03304 | 0.01877 | -0.00374 | 0.06982 | 483.0 | 1.761 | 0.079 |
| angulo5 ✻ lados3 | subt - ankle ✻ R-R - L-L | 0.00848 | 0.01877 | -0.02830 | 0.04526 | 483.0 | 0.452 | 0.652 |

Random Components

| Groups | Name | SD | Variance | ICC |
|---|---|---|---|---|
| sujeto | (Intercept) | 0.0161 | 2.58e-4 | 0.118 |
| Residual | | 0.0440 | 0.00194 | |

*Nota.* Number of Obs: 528 , groups: sujeto 22

## Post Hoc Tests

Post Hoc Comparisons - angulo ✻ lados

| Comparison | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| angulo | lados | | angulo | lados | Difference | SE | t | df | $p_{bonferroni}$ | $p_{holm}$ |
| ankle | L-L | - | ankle | L-R | -0.14702 | 0.0133 | -11.07965 | 483 | < .001 | < .001 |
| ankle | L-L | - | ankle | R-L | -0.15793 | 0.0133 | -11.90202 | 483 | < .001 | < .001 |
| ankle | L-L | - | ankle | R-R | -0.00803 | 0.0133 | -0.60504 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | hip_addu | L-L | -0.01962 | 0.0133 | -1.47871 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | hip_addu | L-R | 7.07e-4 | 0.0133 | 0.05326 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | hip_addu | R-L | 0.00230 | 0.0133 | 0.17362 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | hip_addu | R-R | -0.01628 | 0.0133 | -1.22720 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | hip_flex | L-L | -0.09818 | 0.0133 | -7.39906 | 483 | < .001 | < .001 |
| ankle | L-L | - | hip_flex | L-R | -0.22004 | 0.0133 | -16.58255 | 483 | < .001 | < .001 |
| ankle | L-L | - | hip_flex | R-L | -0.24792 | 0.0133 | -18.68335 | 483 | < .001 | < .001 |
| ankle | L-L | - | hip_flex | R-R | -0.10169 | 0.0133 | -7.66326 | 483 | < .001 | < .001 |
| ankle | L-L | - | hip_rot | L-L | -0.04493 | 0.0133 | -3.38602 | 483 | 0.212 | 0.085 |
| ankle | L-L | - | hip_rot | L-R | -0.00710 | 0.0133 | -0.53541 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | hip_rot | R-L | 0.00220 | 0.0133 | 0.16557 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | hip_rot | R-R | -0.06812 | 0.0133 | -5.13345 | 483 | < .001 | < .001 |
| ankle | L-L | - | knee | L-L | -0.39983 | 0.0133 | -30.13160 | 483 | < .001 | < .001 |
| ankle | L-L | - | knee | L-R | -0.02554 | 0.0133 | -1.92462 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | knee | R-L | -0.04372 | 0.0133 | -3.29507 | 483 | 0.292 | 0.115 |
| ankle | L-L | - | knee | R-R | -0.44090 | 0.0133 | -33.22649 | 483 | < .001 | < .001 |
| ankle | L-L | - | subt | L-L | -0.01601 | 0.0133 | -1.20631 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | subt | L-R | -0.03333 | 0.0133 | -2.51178 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | subt | R-L | -0.01566 | 0.0133 | -1.17995 | 483 | 1.000 | 1.000 |
| ankle | L-L | - | subt | R-R | -0.03252 | 0.0133 | -2.45039 | 483 | 1.000 | 1.000 |
| ankle | L-R | - | ankle | R-L | -0.01091 | 0.0133 | -0.82238 | 483 | 1.000 | 1.000 |
| ankle | L-R | - | ankle | R-R | 0.13899 | 0.0133 | 10.47461 | 483 | < .001 | < .001 |
| ankle | L-R | - | hip_addu | L-R | 0.14773 | 0.0133 | 11.13291 | 483 | < .001 | < .001 |
| ankle | L-R | - | hip_addu | R-L | 0.14933 | 0.0133 | 11.25327 | 483 | < .001 | < .001 |
| ankle | L-R | - | hip_addu | R-R | 0.13074 | 0.0133 | 9.85245 | 483 | < .001 | < .001 |
| ankle | L-R | - | hip_flex | L-R | -0.07302 | 0.0133 | -5.50291 | 483 | < .001 | < .001 |
| ankle | L-R | - | hip_flex | R-L | -0.10090 | 0.0133 | -7.60370 | 483 | < .001 | < .001 |
| ankle | L-R | - | hip_flex | R-R | 0.04533 | 0.0133 | 3.41639 | 483 | 0.190 | 0.077 |
| ankle | L-R | - | hip_rot | L-R | 0.13992 | 0.0133 | 10.54424 | 483 | < .001 | < .001 |
| ankle | L-R | - | hip_rot | R-L | 0.14922 | 0.0133 | 11.24522 | 483 | < .001 | < .001 |
| ankle | L-R | - | hip_rot | R-R | 0.07890 | 0.0133 | 5.94619 | 483 | < .001 | < .001 |
| ankle | L-R | - | knee | L-R | 0.12148 | 0.0133 | 9.15503 | 483 | < .001 | < .001 |
| ankle | L-R | - | knee | R-L | 0.10330 | 0.0133 | 7.78458 | 483 | < .001 | < .001 |
| ankle | L-R | - | knee | R-R | -0.29388 | 0.0133 | -22.14684 | 483 | < .001 | < .001 |
| ankle | L-R | - | subt | L-R | 0.11369 | 0.0133 | 8.56786 | 483 | < .001 | < .001 |
| ankle | L-R | - | subt | R-L | 0.13136 | 0.0133 | 9.89970 | 483 | < .001 | < .001 |
| ankle | L-R | - | subt | R-R | 0.11451 | 0.0133 | 8.62926 | 483 | < .001 | < .001 |
| ankle | R-L | - | ankle | R-R | 0.14991 | 0.0133 | 11.29698 | 483 | < .001 | < .001 |
| ankle | R-L | - | hip_addu | R-L | 0.16024 | 0.0133 | 12.07565 | 483 | < .001 | < .001 |
| ankle | R-L | - | hip_addu | R-R | 0.14165 | 0.0133 | 10.67483 | 483 | < .001 | < .001 |
| ankle | R-L | - | hip_flex | R-L | -0.08999 | 0.0133 | -6.78132 | 483 | < .001 | < .001 |
| ankle | R-L | - | hip_flex | R-R | 0.05625 | 0.0133 | 4.23876 | 483 | 0.007 | 0.003 |
| ankle | R-L | - | hip_rot | R-L | 0.16013 | 0.0133 | 12.06759 | 483 | < .001 | < .001 |
| ankle | R-L | - | hip_rot | R-R | 0.08982 | 0.0133 | 6.76857 | 483 | < .001 | < .001 |
| ankle | R-L | - | knee | R-L | 0.11421 | 0.0133 | 8.60696 | 483 | < .001 | < .001 |
| ankle | R-L | - | knee | R-R | -0.28297 | 0.0133 | -21.32446 | 483 | < .001 | < .001 |

Post Hoc Comparisons - angulo ✻ lados

| Comparison | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| angulo | lados | | angulo | lados | Difference | SE | t | df | $p_{bonferroni}$ | $p_{holm}$ |
| ankle | R-L | - | subt | R-L | 0.14228 | 0.0133 | 10.72207 | 483 | < .001 | < .001 |
| ankle | R-L | - | subt | R-R | 0.12542 | 0.0133 | 9.45164 | 483 | < .001 | < .001 |
| ankle | R-R | - | hip_addu | R-R | -0.00826 | 0.0133 | -0.62216 | 483 | 1.000 | 1.000 |
| ankle | R-R | - | hip_flex | R-R | -0.09366 | 0.0133 | -7.05822 | 483 | < .001 | < .001 |
| ankle | R-R | - | hip_rot | R-R | -0.06009 | 0.0133 | -4.52841 | 483 | 0.002 | < .001 |
| ankle | R-R | - | knee | R-R | -0.43287 | 0.0133 | -32.62145 | 483 | < .001 | < .001 |
| ankle | R-R | - | subt | R-R | -0.02449 | 0.0133 | -1.84535 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | ankle | L-R | -0.12740 | 0.0133 | -9.60094 | 483 | < .001 | < .001 |
| hip_addu | L-L | - | ankle | R-L | -0.13831 | 0.0133 | -10.42331 | 483 | < .001 | < .001 |
| hip_addu | L-L | - | ankle | R-R | 0.01159 | 0.0133 | 0.87367 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | hip_addu | L-R | 0.02033 | 0.0133 | 1.53197 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | hip_addu | R-L | 0.02193 | 0.0133 | 1.65233 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | hip_addu | R-R | 0.00334 | 0.0133 | 0.25152 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | hip_flex | L-L | -0.07856 | 0.0133 | -5.92035 | 483 | < .001 | < .001 |
| hip_addu | L-L | - | hip_flex | L-R | -0.20042 | 0.0133 | -15.10384 | 483 | < .001 | < .001 |
| hip_addu | L-L | - | hip_flex | R-L | -0.22830 | 0.0133 | -17.20463 | 483 | < .001 | < .001 |
| hip_addu | L-L | - | hip_flex | R-R | -0.08207 | 0.0133 | -6.18455 | 483 | < .001 | < .001 |
| hip_addu | L-L | - | hip_rot | L-L | -0.02531 | 0.0133 | -1.90730 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | hip_rot | L-R | 0.01252 | 0.0133 | 0.94330 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | hip_rot | R-L | 0.02182 | 0.0133 | 1.64428 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | hip_rot | R-R | -0.04850 | 0.0133 | -3.65474 | 483 | 0.079 | 0.034 |
| hip_addu | L-L | - | knee | L-L | -0.38021 | 0.0133 | -28.65289 | 483 | < .001 | < .001 |
| hip_addu | L-L | - | knee | L-R | -0.00592 | 0.0133 | -0.44591 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | knee | R-L | -0.02410 | 0.0133 | -1.81635 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | knee | R-R | -0.42128 | 0.0133 | -31.74777 | 483 | < .001 | < .001 |
| hip_addu | L-L | - | subt | L-L | 0.00361 | 0.0133 | 0.27240 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | subt | L-R | -0.01371 | 0.0133 | -1.03307 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | subt | R-L | 0.00396 | 0.0133 | 0.29876 | 483 | 1.000 | 1.000 |
| hip_addu | L-L | - | subt | R-R | -0.01289 | 0.0133 | -0.97167 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | ankle | R-L | -0.15864 | 0.0133 | -11.95528 | 483 | < .001 | < .001 |
| hip_addu | L-R | - | ankle | R-R | -0.00874 | 0.0133 | -0.65830 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | hip_addu | R-L | 0.00160 | 0.0133 | 0.12036 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | hip_addu | R-R | -0.01699 | 0.0133 | -1.28046 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | hip_flex | L-R | -0.22075 | 0.0133 | -16.63581 | 483 | < .001 | < .001 |
| hip_addu | L-R | - | hip_flex | R-L | -0.24863 | 0.0133 | -18.73661 | 483 | < .001 | < .001 |
| hip_addu | L-R | - | hip_flex | R-R | -0.10239 | 0.0133 | -7.71652 | 483 | < .001 | < .001 |
| hip_addu | L-R | - | hip_rot | L-R | -0.00781 | 0.0133 | -0.58867 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | hip_rot | R-L | 0.00149 | 0.0133 | 0.11231 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | hip_rot | R-R | -0.06883 | 0.0133 | -5.18671 | 483 | < .001 | < .001 |
| hip_addu | L-R | - | knee | L-R | -0.02625 | 0.0133 | -1.97788 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | knee | R-L | -0.04443 | 0.0133 | -3.34833 | 483 | 0.242 | 0.096 |
| hip_addu | L-R | - | knee | R-R | -0.44161 | 0.0133 | -33.27975 | 483 | < .001 | < .001 |
| hip_addu | L-R | - | subt | L-R | -0.03404 | 0.0133 | -2.56504 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | subt | R-L | -0.01636 | 0.0133 | -1.23321 | 483 | 1.000 | 1.000 |
| hip_addu | L-R | - | subt | R-R | -0.03322 | 0.0133 | -2.50365 | 483 | 1.000 | 1.000 |
| hip_addu | R-L | - | ankle | R-R | -0.01033 | 0.0133 | -0.77866 | 483 | 1.000 | 1.000 |
| hip_addu | R-L | - | hip_addu | R-R | -0.01859 | 0.0133 | -1.40082 | 483 | 1.000 | 1.000 |
| hip_addu | R-L | - | hip_flex | R-L | -0.25022 | 0.0133 | -18.85697 | 483 | < .001 | < .001 |
| hip_addu | R-L | - | hip_flex | R-R | -0.10399 | 0.0133 | -7.83688 | 483 | < .001 | < .001 |

Post Hoc Comparisons - angulo ✻ lados

| Comparison | | | | | Difference | SE | t | df | $p_{bonferroni}$ | $p_{holm}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| angulo | lados | | angulo | lados | | | | | | |
| hip_addu | R-L | - | hip_rot | R-L | -1.07e−4 | 0.0133 | -0.00805 | 483 | 1.000 | 1.000 |
| hip_addu | R-L | - | hip_rot | R-R | -0.07042 | 0.0133 | -5.30708 | 483 | < .001 | < .001 |
| hip_addu | R-L | - | knee | R-L | -0.04603 | 0.0133 | -3.46869 | 483 | 0.157 | 0.066 |
| hip_addu | R-L | - | knee | R-R | -0.44320 | 0.0133 | -33.40011 | 483 | < .001 | < .001 |
| hip_addu | R-L | - | subt | R-L | -0.01796 | 0.0133 | -1.35357 | 483 | 1.000 | 1.000 |
| hip_addu | R-L | - | subt | R-R | -0.03482 | 0.0133 | -2.62401 | 483 | 1.000 | 0.888 |
| hip_addu | R-R | - | hip_flex | R-R | -0.08540 | 0.0133 | -6.43606 | 483 | < .001 | < .001 |
| hip_addu | R-R | - | hip_rot | R-R | -0.05183 | 0.0133 | -3.90626 | 483 | 0.030 | 0.013 |
| hip_addu | R-R | - | knee | R-R | -0.42462 | 0.0133 | -31.99929 | 483 | < .001 | < .001 |
| hip_addu | R-R | - | subt | R-R | -0.01623 | 0.0133 | -1.22319 | 483 | 1.000 | 1.000 |
| hip_flex | L-L | - | ankle | L-R | -0.04884 | 0.0133 | -3.68059 | 483 | 0.071 | 0.031 |
| hip_flex | L-L | - | ankle | R-L | -0.05975 | 0.0133 | -4.50296 | 483 | 0.002 | 0.001 |
| hip_flex | L-L | - | ankle | R-R | 0.09015 | 0.0133 | 6.79402 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | hip_addu | L-R | 0.09889 | 0.0133 | 7.45232 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | hip_addu | R-L | 0.10049 | 0.0133 | 7.57268 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | hip_addu | R-R | 0.08190 | 0.0133 | 6.17187 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | hip_flex | L-R | -0.12186 | 0.0133 | -9.18349 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | hip_flex | R-L | -0.14974 | 0.0133 | -11.28428 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | hip_flex | R-R | -0.00351 | 0.0133 | -0.26420 | 483 | 1.000 | 1.000 |
| hip_flex | L-L | - | hip_rot | L-L | 0.05325 | 0.0133 | 4.01305 | 483 | 0.019 | 0.009 |
| hip_flex | L-L | - | hip_rot | L-R | 0.09108 | 0.0133 | 6.86365 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | hip_rot | R-L | 0.10038 | 0.0133 | 7.56463 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | hip_rot | R-R | 0.03006 | 0.0133 | 2.26561 | 483 | 1.000 | 1.000 |
| hip_flex | L-L | - | knee | L-L | -0.30165 | 0.0133 | -22.73254 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | knee | L-R | 0.07264 | 0.0133 | 5.47444 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | knee | R-L | 0.05446 | 0.0133 | 4.10400 | 483 | 0.013 | 0.006 |
| hip_flex | L-L | - | knee | R-R | -0.34272 | 0.0133 | -25.82742 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | subt | L-L | 0.08218 | 0.0133 | 6.19275 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | subt | L-R | 0.06485 | 0.0133 | 4.88728 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | subt | R-L | 0.08252 | 0.0133 | 6.21911 | 483 | < .001 | < .001 |
| hip_flex | L-L | - | subt | R-R | 0.06567 | 0.0133 | 4.94867 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | ankle | R-L | 0.06211 | 0.0133 | 4.68053 | 483 | 0.001 | < .001 |
| hip_flex | L-R | - | ankle | R-R | 0.21201 | 0.0133 | 15.97751 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | hip_addu | R-L | 0.22235 | 0.0133 | 16.75617 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | hip_addu | R-R | 0.20376 | 0.0133 | 15.35536 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | hip_flex | R-L | -0.02788 | 0.0133 | -2.10079 | 483 | 1.000 | 1.000 |
| hip_flex | L-R | - | hip_flex | R-R | 0.11836 | 0.0133 | 8.91929 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | hip_rot | L-R | 0.21294 | 0.0133 | 16.04714 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | hip_rot | R-L | 0.22224 | 0.0133 | 16.74812 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | hip_rot | R-R | 0.15192 | 0.0133 | 11.44910 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | knee | L-R | 0.19450 | 0.0133 | 14.65793 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | knee | R-L | 0.17632 | 0.0133 | 13.28749 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | knee | R-R | -0.22086 | 0.0133 | -16.64393 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | subt | L-R | 0.18671 | 0.0133 | 14.07077 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | subt | R-L | 0.20439 | 0.0133 | 15.40260 | 483 | < .001 | < .001 |
| hip_flex | L-R | - | subt | R-R | 0.18753 | 0.0133 | 14.13217 | 483 | < .001 | < .001 |
| hip_flex | R-L | - | ankle | R-R | 0.23989 | 0.0133 | 18.07831 | 483 | < .001 | < .001 |
| hip_flex | R-L | - | hip_addu | R-R | 0.23164 | 0.0133 | 17.45615 | 483 | < .001 | < .001 |
| hip_flex | R-L | - | hip_flex | R-R | 0.14623 | 0.0133 | 11.02009 | 483 | < .001 | < .001 |

Post Hoc Comparisons - angulo ✻ lados

| Comparison | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| angulo | lados | | angulo | lados | Difference | SE | t | df | $p_{bonferroni}$ | $p_{holm}$ |
| hip_flex | R-L | - | hip_rot | R-L | 0.25012 | 0.0133 | 18.84892 | 483 | < .001 | < .001 |
| hip_flex | R-L | - | hip_rot | R-R | 0.17980 | 0.0133 | 13.54989 | 483 | < .001 | < .001 |
| hip_flex | R-L | - | knee | R-L | 0.20420 | 0.0133 | 15.38828 | 483 | < .001 | < .001 |
| hip_flex | R-L | - | knee | R-R | -0.19298 | 0.0133 | -14.54314 | 483 | < .001 | < .001 |
| hip_flex | R-L | - | subt | R-L | 0.23226 | 0.0133 | 17.50340 | 483 | < .001 | < .001 |
| hip_flex | R-L | - | subt | R-R | 0.21540 | 0.0133 | 16.23296 | 483 | < .001 | < .001 |
| hip_flex | R-R | - | hip_rot | R-R | 0.03357 | 0.0133 | 2.52981 | 483 | 1.000 | 1.000 |
| hip_flex | R-R | - | knee | R-R | -0.33921 | 0.0133 | -25.56322 | 483 | < .001 | < .001 |
| hip_flex | R-R | - | subt | R-R | 0.06917 | 0.0133 | 5.21287 | 483 | < .001 | < .001 |
| hip_rot | L-L | - | ankle | L-R | -0.10209 | 0.0133 | -7.69363 | 483 | < .001 | < .001 |
| hip_rot | L-L | - | ankle | R-L | -0.11300 | 0.0133 | -8.51601 | 483 | < .001 | < .001 |
| hip_rot | L-L | - | ankle | R-R | 0.03690 | 0.0133 | 2.78098 | 483 | 1.000 | 0.591 |
| hip_rot | L-L | - | hip_addu | L-R | 0.04564 | 0.0133 | 3.43928 | 483 | 0.175 | 0.072 |
| hip_rot | L-L | - | hip_addu | R-L | 0.04723 | 0.0133 | 3.55964 | 483 | 0.113 | 0.048 |
| hip_rot | L-L | - | hip_addu | R-R | 0.02865 | 0.0133 | 2.15882 | 483 | 1.000 | 1.000 |
| hip_rot | L-L | - | hip_flex | L-R | -0.17511 | 0.0133 | -13.19654 | 483 | < .001 | < .001 |
| hip_rot | L-L | - | hip_flex | R-L | -0.20299 | 0.0133 | -15.29733 | 483 | < .001 | < .001 |
| hip_rot | L-L | - | hip_flex | R-R | -0.05676 | 0.0133 | -4.27724 | 483 | 0.006 | 0.003 |
| hip_rot | L-L | - | hip_rot | L-R | 0.03783 | 0.0133 | 2.85060 | 483 | 1.000 | 0.482 |
| hip_rot | L-L | - | hip_rot | R-L | 0.04713 | 0.0133 | 3.55158 | 483 | 0.116 | 0.049 |
| hip_rot | L-L | - | hip_rot | R-R | -0.02319 | 0.0133 | -1.74744 | 483 | 1.000 | 1.000 |
| hip_rot | L-L | - | knee | L-L | -0.35490 | 0.0133 | -26.74559 | 483 | < .001 | < .001 |
| hip_rot | L-L | - | knee | L-R | 0.01939 | 0.0133 | 1.46140 | 483 | 1.000 | 1.000 |
| hip_rot | L-L | - | knee | R-L | 0.00121 | 0.0133 | 0.09095 | 483 | 1.000 | 1.000 |
| hip_rot | L-L | - | knee | R-R | -0.39597 | 0.0133 | -29.84047 | 483 | < .001 | < .001 |
| hip_rot | L-L | - | subt | L-L | 0.02892 | 0.0133 | 2.17970 | 483 | 1.000 | 1.000 |
| hip_rot | L-L | - | subt | L-R | 0.01160 | 0.0133 | 0.87423 | 483 | 1.000 | 1.000 |
| hip_rot | L-L | - | subt | R-L | 0.02927 | 0.0133 | 2.20607 | 483 | 1.000 | 1.000 |
| hip_rot | L-L | - | subt | R-R | 0.01242 | 0.0133 | 0.93563 | 483 | 1.000 | 1.000 |
| hip_rot | L-R | - | ankle | R-L | -0.15083 | 0.0133 | -11.36661 | 483 | < .001 | < .001 |
| hip_rot | L-R | - | ankle | R-R | -9.24e−4 | 0.0133 | -0.06963 | 483 | 1.000 | 1.000 |
| hip_rot | L-R | - | hip_addu | R-L | 0.00941 | 0.0133 | 0.70903 | 483 | 1.000 | 1.000 |
| hip_rot | L-R | - | hip_addu | R-R | -0.00918 | 0.0133 | -0.69178 | 483 | 1.000 | 1.000 |
| hip_rot | L-R | - | hip_flex | R-L | -0.24082 | 0.0133 | -18.14793 | 483 | < .001 | < .001 |
| hip_rot | L-R | - | hip_flex | R-R | -0.09458 | 0.0133 | -7.12785 | 483 | < .001 | < .001 |
| hip_rot | L-R | - | hip_rot | R-L | 0.00930 | 0.0133 | 0.70098 | 483 | 1.000 | 1.000 |
| hip_rot | L-R | - | hip_rot | R-R | -0.06101 | 0.0133 | -4.59804 | 483 | 0.002 | < .001 |
| hip_rot | L-R | - | knee | L-R | -0.01843 | 0.0133 | -1.38921 | 483 | 1.000 | 1.000 |
| hip_rot | L-R | - | knee | R-L | -0.03662 | 0.0133 | -2.75965 | 483 | 1.000 | 0.625 |
| hip_rot | L-R | - | knee | R-R | -0.43380 | 0.0133 | -32.69107 | 483 | < .001 | < .001 |
| hip_rot | L-R | - | subt | L-R | -0.02623 | 0.0133 | -1.97637 | 483 | 1.000 | 1.000 |
| hip_rot | L-R | - | subt | R-L | -0.00855 | 0.0133 | -0.64454 | 483 | 1.000 | 1.000 |
| hip_rot | L-R | - | subt | R-R | -0.02541 | 0.0133 | -1.91498 | 483 | 1.000 | 1.000 |
| hip_rot | R-L | - | ankle | R-R | -0.01023 | 0.0133 | -0.77061 | 483 | 1.000 | 1.000 |
| hip_rot | R-L | - | hip_addu | R-R | -0.01848 | 0.0133 | -1.39277 | 483 | 1.000 | 1.000 |
| hip_rot | R-L | - | hip_flex | R-R | -0.10389 | 0.0133 | -7.82883 | 483 | < .001 | < .001 |
| hip_rot | R-L | - | hip_rot | R-R | -0.07032 | 0.0133 | -5.29902 | 483 | < .001 | < .001 |
| hip_rot | R-L | - | knee | R-L | -0.04592 | 0.0133 | -3.46064 | 483 | 0.162 | 0.067 |
| hip_rot | R-L | - | knee | R-R | -0.44310 | 0.0133 | -33.39205 | 483 | < .001 | < .001 |

Post Hoc Comparisons - angulo ✻ lados

| Comparison | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| angulo | lados | | angulo | lados | Difference | SE | t | df | $p_{bonferroni}$ | $p_{holm}$ |
| hip_rot | R-L | - | subt | R-L | -0.01785 | 0.0133 | -1.34552 | 483 | 1.000 | 1.000 |
| hip_rot | R-L | - | subt | R-R | -0.03471 | 0.0133 | -2.61596 | 483 | 1.000 | 0.890 |
| hip_rot | R-R | - | knee | R-R | -0.37278 | 0.0133 | -28.09303 | 483 | < .001 | < .001 |
| hip_rot | R-R | - | subt | R-R | 0.03560 | 0.0133 | 2.68307 | 483 | 1.000 | 0.764 |
| knee | L-L | - | ankle | L-R | 0.25281 | 0.0133 | 19.05196 | 483 | < .001 | < .001 |
| knee | L-L | - | ankle | R-L | 0.24190 | 0.0133 | 18.22958 | 483 | < .001 | < .001 |
| knee | L-L | - | ankle | R-R | 0.39180 | 0.0133 | 29.52656 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_addu | L-R | 0.40054 | 0.0133 | 30.18486 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_addu | R-L | 0.40214 | 0.0133 | 30.30523 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_addu | R-R | 0.38355 | 0.0133 | 28.90441 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_flex | L-R | 0.17979 | 0.0133 | 13.54905 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_flex | R-L | 0.15191 | 0.0133 | 11.44826 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_flex | R-R | 0.29815 | 0.0133 | 22.46834 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_rot | L-R | 0.39273 | 0.0133 | 29.59619 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_rot | R-L | 0.40203 | 0.0133 | 30.29717 | 483 | < .001 | < .001 |
| knee | L-L | - | hip_rot | R-R | 0.33171 | 0.0133 | 24.99815 | 483 | < .001 | < .001 |
| knee | L-L | - | knee | L-R | 0.37429 | 0.0133 | 28.20698 | 483 | < .001 | < .001 |
| knee | L-L | - | knee | R-L | 0.35611 | 0.0133 | 26.83654 | 483 | < .001 | < .001 |
| knee | L-L | - | knee | R-R | -0.04107 | 0.0133 | -3.09488 | 483 | 0.575 | 0.223 |
| knee | L-L | - | subt | L-L | 0.38383 | 0.0133 | 28.92529 | 483 | < .001 | < .001 |
| knee | L-L | - | subt | L-R | 0.36650 | 0.0133 | 27.61982 | 483 | < .001 | < .001 |
| knee | L-L | - | subt | R-L | 0.38418 | 0.0133 | 28.95165 | 483 | < .001 | < .001 |
| knee | L-L | - | subt | R-R | 0.36732 | 0.0133 | 27.68122 | 483 | < .001 | < .001 |
| knee | L-R | - | ankle | R-L | -0.13240 | 0.0133 | -9.97740 | 483 | < .001 | < .001 |
| knee | L-R | - | ankle | R-R | 0.01751 | 0.0133 | 1.31958 | 483 | 1.000 | 1.000 |
| knee | L-R | - | hip_addu | R-L | 0.02784 | 0.0133 | 2.09824 | 483 | 1.000 | 1.000 |
| knee | L-R | - | hip_addu | R-R | 0.00925 | 0.0133 | 0.69742 | 483 | 1.000 | 1.000 |
| knee | L-R | - | hip_flex | R-L | -0.22238 | 0.0133 | -16.75873 | 483 | < .001 | < .001 |
| knee | L-R | - | hip_flex | R-R | -0.07615 | 0.0133 | -5.73864 | 483 | < .001 | < .001 |
| knee | L-R | - | hip_rot | R-L | 0.02774 | 0.0133 | 2.09019 | 483 | 1.000 | 1.000 |
| knee | L-R | - | hip_rot | R-R | -0.04258 | 0.0133 | -3.20883 | 483 | 0.392 | 0.154 |
| knee | L-R | - | knee | R-L | -0.01819 | 0.0133 | -1.37045 | 483 | 1.000 | 1.000 |
| knee | L-R | - | knee | R-R | -0.41536 | 0.0133 | -31.30186 | 483 | < .001 | < .001 |
| knee | L-R | - | subt | L-R | -0.00779 | 0.0133 | -0.58716 | 483 | 1.000 | 1.000 |
| knee | L-R | - | subt | R-L | 0.00988 | 0.0133 | 0.74467 | 483 | 1.000 | 1.000 |
| knee | L-R | - | subt | R-R | -0.00698 | 0.0133 | -0.52577 | 483 | 1.000 | 1.000 |
| knee | R-L | - | ankle | R-R | 0.03570 | 0.0133 | 2.69003 | 483 | 1.000 | 0.761 |
| knee | R-L | - | hip_addu | R-R | 0.02744 | 0.0133 | 2.06787 | 483 | 1.000 | 1.000 |
| knee | R-L | - | hip_flex | R-R | -0.05796 | 0.0133 | -4.36819 | 483 | 0.004 | 0.002 |
| knee | R-L | - | hip_rot | R-R | -0.02439 | 0.0133 | -1.83839 | 483 | 1.000 | 1.000 |
| knee | R-L | - | knee | R-R | -0.39718 | 0.0133 | -29.93142 | 483 | < .001 | < .001 |
| knee | R-L | - | subt | R-L | 0.02807 | 0.0133 | 2.11512 | 483 | 1.000 | 1.000 |
| knee | R-L | - | subt | R-R | 0.01121 | 0.0133 | 0.84468 | 483 | 1.000 | 1.000 |
| knee | R-R | - | subt | R-R | 0.40839 | 0.0133 | 30.77610 | 483 | < .001 | < .001 |
| subt | L-L | - | ankle | L-R | -0.13101 | 0.0133 | -9.87333 | 483 | < .001 | < .001 |
| subt | L-L | - | ankle | R-L | -0.14193 | 0.0133 | -10.69571 | 483 | < .001 | < .001 |
| subt | L-L | - | ankle | R-R | 0.00798 | 0.0133 | 0.60127 | 483 | 1.000 | 1.000 |
| subt | L-L | - | hip_addu | L-R | 0.01671 | 0.0133 | 1.25957 | 483 | 1.000 | 1.000 |
| subt | L-L | - | hip_addu | R-L | 0.01831 | 0.0133 | 1.37993 | 483 | 1.000 | 1.000 |

Post Hoc Comparisons - angulo ✻ lados

| Comparison | | | | | Difference | SE | t | df | $p_{bonferroni}$ | $p_{holm}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| angulo | lados | | angulo | lados | | | | | | |
| subt | L-L | - | hip_addu | R-R | -2.77e−4 | 0.0133 | -0.02088 | 483 | 1.000 | 1.000 |
| subt | L-L | - | hip_flex | L-R | -0.20404 | 0.0133 | -15.37624 | 483 | < .001 | < .001 |
| subt | L-L | - | hip_flex | R-L | -0.23191 | 0.0133 | -17.47703 | 483 | < .001 | < .001 |
| subt | L-L | - | hip_flex | R-R | -0.08568 | 0.0133 | -6.45695 | 483 | < .001 | < .001 |
| subt | L-L | - | hip_rot | L-R | 0.00890 | 0.0133 | 0.67090 | 483 | 1.000 | 1.000 |
| subt | L-L | - | hip_rot | R-L | 0.01820 | 0.0133 | 1.37188 | 483 | 1.000 | 1.000 |
| subt | L-L | - | hip_rot | R-R | -0.05211 | 0.0133 | -3.92714 | 483 | 0.027 | 0.012 |
| subt | L-L | - | knee | L-R | -0.00953 | 0.0133 | -0.71831 | 483 | 1.000 | 1.000 |
| subt | L-L | - | knee | R-L | -0.02772 | 0.0133 | -2.08875 | 483 | 1.000 | 1.000 |
| subt | L-L | - | knee | R-R | -0.42489 | 0.0133 | -32.02017 | 483 | < .001 | < .001 |
| subt | L-L | - | subt | L-R | -0.01732 | 0.0133 | -1.30547 | 483 | 1.000 | 1.000 |
| subt | L-L | - | subt | R-L | 3.50e-4 | 0.0133 | 0.02636 | 483 | 1.000 | 1.000 |
| subt | L-L | - | subt | R-R | -0.01651 | 0.0133 | -1.24407 | 483 | 1.000 | 1.000 |
| subt | L-R | - | ankle | R-L | -0.12460 | 0.0133 | -9.39024 | 483 | < .001 | < .001 |
| subt | L-R | - | ankle | R-R | 0.02530 | 0.0133 | 1.90674 | 483 | 1.000 | 1.000 |
| subt | L-R | - | hip_addu | R-L | 0.03563 | 0.0133 | 2.68541 | 483 | 1.000 | 0.764 |
| subt | L-R | - | hip_addu | R-R | 0.01705 | 0.0133 | 1.28459 | 483 | 1.000 | 1.000 |
| subt | L-R | - | hip_flex | R-L | -0.21459 | 0.0133 | -16.17156 | 483 | < .001 | < .001 |
| subt | L-R | - | hip_flex | R-R | -0.06836 | 0.0133 | -5.15148 | 483 | < .001 | < .001 |
| subt | L-R | - | hip_rot | R-L | 0.03553 | 0.0133 | 2.67735 | 483 | 1.000 | 0.767 |
| subt | L-R | - | hip_rot | R-R | -0.03479 | 0.0133 | -2.62167 | 483 | 1.000 | 0.888 |
| subt | L-R | - | knee | R-L | -0.01039 | 0.0133 | -0.78328 | 483 | 1.000 | 1.000 |
| subt | L-R | - | knee | R-R | -0.40757 | 0.0133 | -30.71470 | 483 | < .001 | < .001 |
| subt | L-R | - | subt | R-L | 0.01767 | 0.0133 | 1.33183 | 483 | 1.000 | 1.000 |
| subt | L-R | - | subt | R-R | 8.15e-4 | 0.0133 | 0.06140 | 483 | 1.000 | 1.000 |
| subt | R-L | - | ankle | R-R | 0.00763 | 0.0133 | 0.57491 | 483 | 1.000 | 1.000 |
| subt | R-L | - | hip_addu | R-R | -6.27e−4 | 0.0133 | -0.04725 | 483 | 1.000 | 1.000 |
| subt | R-L | - | hip_flex | R-R | -0.08603 | 0.0133 | -6.48331 | 483 | < .001 | < .001 |
| subt | R-L | - | hip_rot | R-R | -0.05246 | 0.0133 | -3.95350 | 483 | 0.024 | 0.011 |
| subt | R-L | - | knee | R-R | -0.42524 | 0.0133 | -32.04653 | 483 | < .001 | < .001 |
| subt | R-L | - | subt | R-R | -0.01686 | 0.0133 | -1.27044 | 483 | 1.000 | 1.000 |

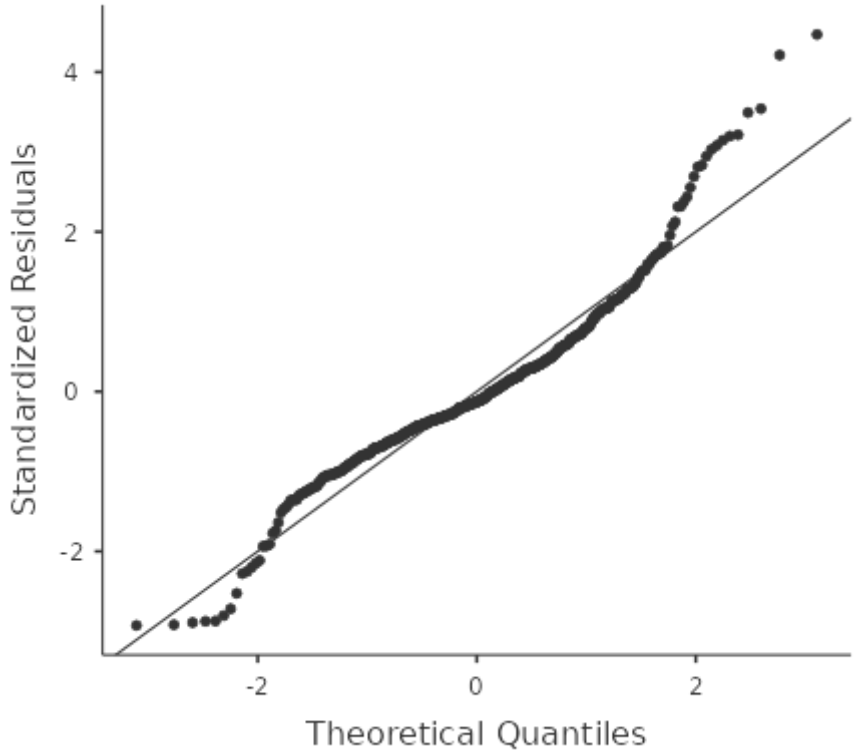
Note: Residuals plotted by sujeto

## Assumption Checks

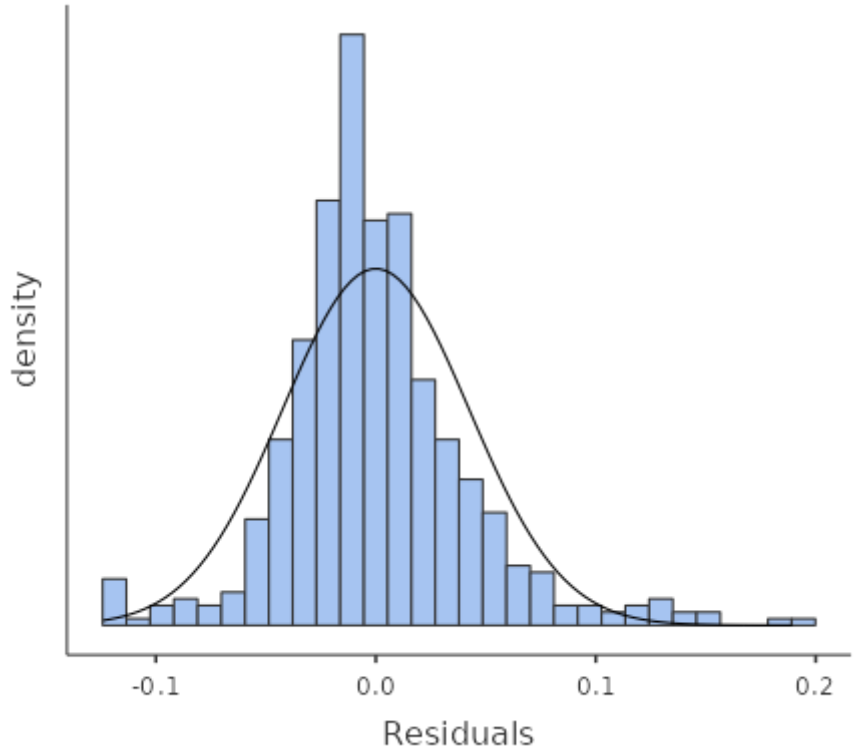
Test for Normality of residuals

| Test | Statistics | p |
|---|---|---|
| Kolmogorov-Smirnov | 0.0883 | < .001 |
| Shapiro-Wilk | 0.9443 | < .001 |

**Q-Q Plot**

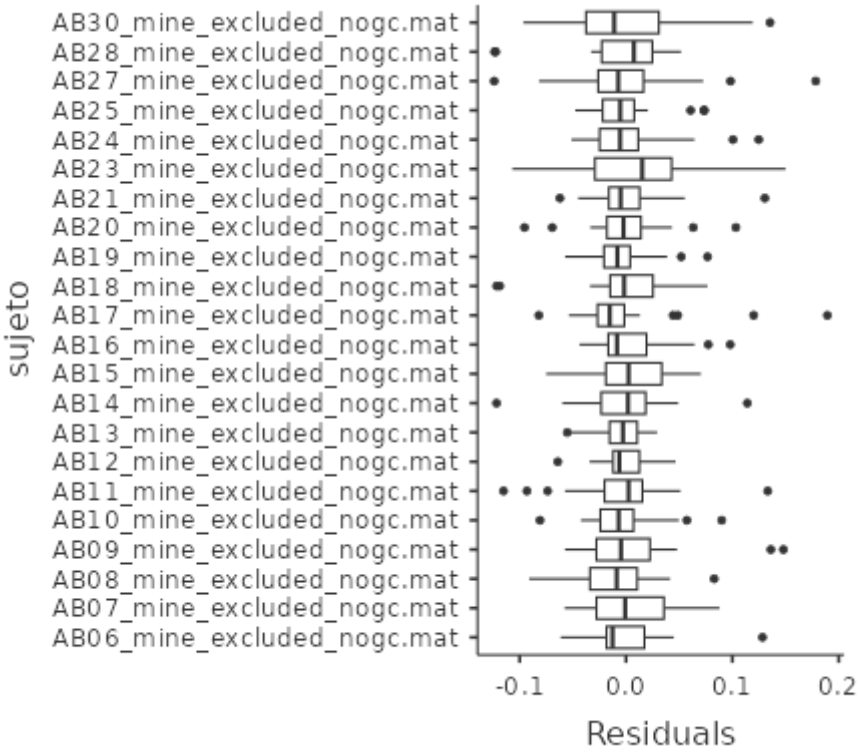



**Residual histogram**




**Residuals by cluster boxplot**

**Clustering variable: sujeto**

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