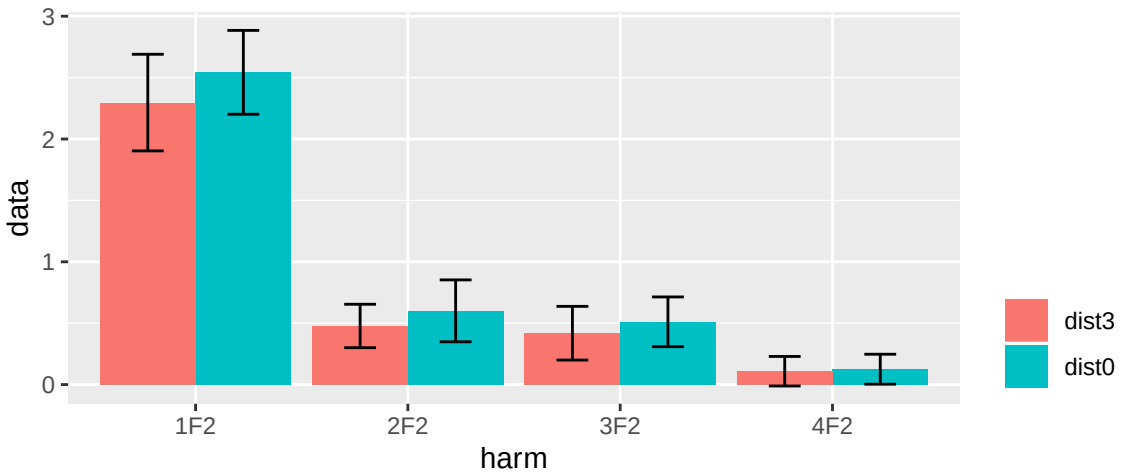
NUMEROSITY ANALYSIS RESULTS

```
top_folder = '/Users/kohler/Google Drive/WRITING/Articles/2019_KohlerNumerositySSVEP/figures/results/experiment3
counter = 0
for (q in c(1,2,3,4)) {
  for (c in c(5,6,8,9)) {
    cur_file = switch(q, "RLS_carrier_rc1_carr", "RLS_oddball_rc1_carr", "RLS_carrier_rc2_carr", "RLS_oddball_rc
    cur_csv <- sprintf('%s/%s%d_full_projected_all_trials.csv', top_folder, cur_file, c)
    cur_data <-data.frame( read.csv(file = cur_csv ) )
    cur_data$cond <- factor(cur_data$condition, levels(cur_data$condition)[c(2,1)])
    cur_data$harm <- cur_data$harmonic
    cur_data$harm_alt <- factor(cur_data$harmonic, levels(cur_data$harmonic)[c(2,1,3,4)])
    g <- ggplot(cur_data, aes(harm, data, fill = cond)) +
      stat_summary(geom = "bar", fun.y = mean, position=position_dodge()) +
      stat_summary(geom = "errorbar", fun.data = mean_se, width=.3, position=position_dodge(.9))
    g <- g + theme(legend.title=element_blank(),
      legend.justification=c(1,0),
      legend.background = element_blank()) +
      ggtitle(toupper(sprintf('%s%d\n',cur_file, c)))
    if (q == 1 && c == 5) { cat("RESULTS BELOW") }
    print(g)
    m1 <- lmer(data ~ cond * harm + (1|subject), cur_data)
    emm = emmeans(m1, ~ cond * harm, lmer.df = "satterthwaite")
    m2 <- lmer(data ~ cond + harm + (1|subject), cur_data)
    if (isSingular(m1)) {
      if (isSingular(m2)) {
        cat("WARNING: BOTH MODELS ARE SINGULAR!   ")
      } else {
        cat("WARNING: MODEL1 IS SINGULAR, BUT MODEL2 IS NOT!   ")
      }
    } else {
      cat("LOVELY: NONE OF THE MODELS ARE SINGULAR!   ")
    }
    if (!performance::check_convergence(m1)) {
      if (!performance::check_convergence(m2)) {
        cat("WARNING: BOTH MODELS DID NOT CONVERGE!\n\n")
      } else {
        cat("WARNING: MODEL1 DID NOT CONVERGE, BUT MODEL2 DID!\n\n")
      }
    } else {
      cat("LOVELY: BOTH MODELS CONVERGED!\n\n")
    }
    cat("ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS\n")
    print(anova(m1), type='pdf')
    write.csv(as.matrix(anova(m1)),
              file = sprintf('%s/%s%d_full_projected_all_results.csv', top_folder, cur_file, c), na ="")
    cat("\nSUMMARY AND POST-HOC TESTS, harm1 baseline \n")
    print(prettify(summary(m1)), type='pdf')
    cat("\nESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION\n")
    print(prettify(summary(pairs(emm, simple = "cond", adjust = "none"))))
    cat("\nTEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT\n")
    print(anova(m1, m2))
  }
}
```

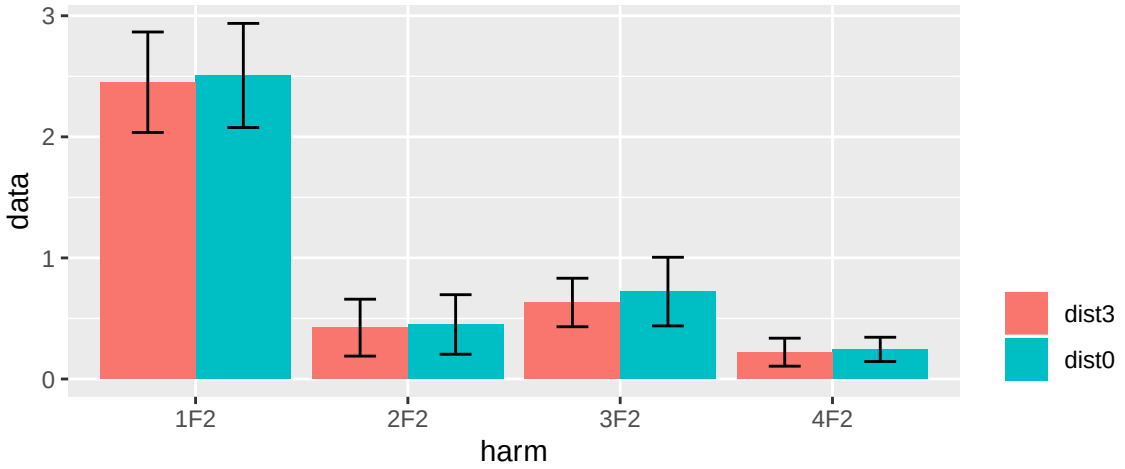
```
## RESULTS BELOW
```

RLS_CARRIER_RC1_CARR5



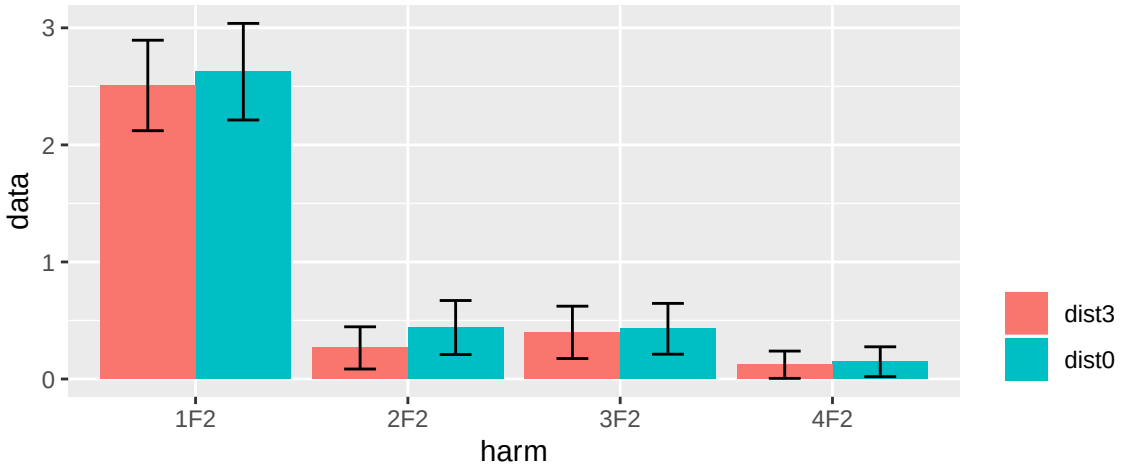

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##           Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond       0.430   0.430     1    98  0.5831 0.4469
## harm      97.269  32.423     3    98 43.9723 <2e-16 ***
## cond:harm  0.206   0.069     3    98  0.0933 0.9636
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                        Estimate CI (lower) CI (upper) Std. Error       df    t value Pr(>|t|)
## 1       (Intercept)  2.2966516  1.8259510  2.7673522  0.2460657 89.75956  9.3334892   <0.001 ***
## 2       cond: dist0  0.2465222 -0.3526576  0.8457019  0.3135498 98.00000  0.7862297    0.434
## 3         harm: 2F2 -1.8194244 -2.4186041 -1.2202446  0.3135498 98.00000 -5.8026646   <0.001 ***
## 4         harm: 3F2 -1.8782279 -2.4774076 -1.2790482  0.3135498 98.00000 -5.9902058   <0.001 ***
## 5         harm: 4F2 -2.1879118 -2.7870916 -1.5887321  0.3135498 98.00000 -6.9778765   <0.001 ***
## 6 conddist0:harm2F2 -0.1232866 -0.9706547  0.7240816  0.4434264 98.00000 -0.2780316    0.782
## 7 conddist0:harm3F2 -0.1537696 -1.0011377  0.6935985  0.4434264 98.00000 -0.3467759     0.73
## 8 conddist0:harm4F2 -0.2301696 -1.0775377  0.6171985  0.4434264 98.00000 -0.5190705    0.605
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE df     t.ratio   p.value
## 1 1 dist3 - dist0  1F2 -0.24652218 0.3135498 98 -0.78622973 0.4336299
## 2 2 dist3 - dist0  2F2 -0.12323562 0.3135498 98 -0.39303363 0.6951483
## 3 3 dist3 - dist0  3F2 -0.09275258 0.3135498 98 -0.29581449 0.7679977
## 4 4 dist3 - dist0  4F2 -0.01635261 0.3135498 98 -0.05215314 0.9585128
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 325.73 345.25 -155.87   311.73
## m1 10 331.43 359.31 -155.72   311.43 0.2993      3     0.9602
```

RLS_CARRIER_RC1_CARR6



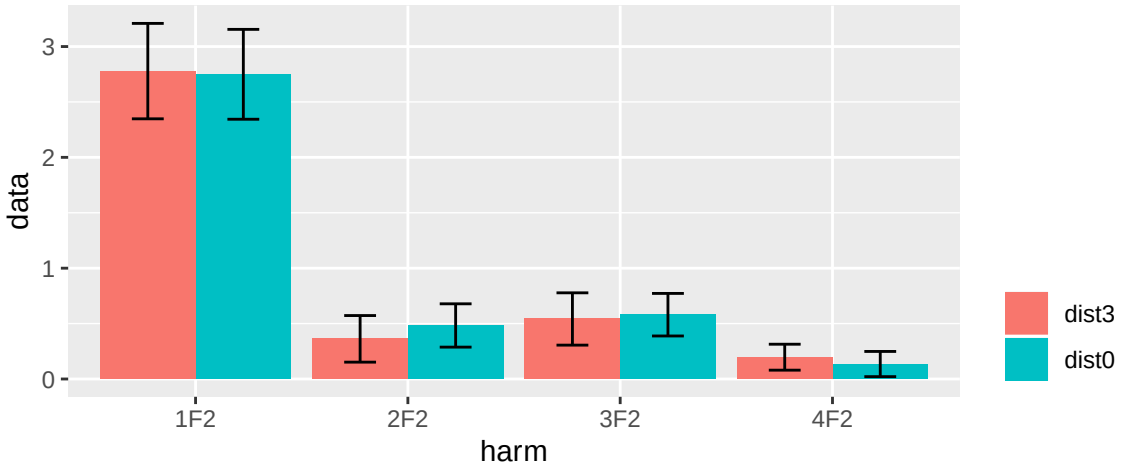

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##           Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
## cond       0.071   0.071     1    98  0.0794    0.7787
## harm      95.684  31.895     3    98 35.4270 1.355e-15 ***
## cond:harm  0.022   0.007     3    98  0.0081    0.9990
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                         Estimate CI (lower) CI (upper) Std. Error       df     t value Pr(>|t|)
## 1       (Intercept)  2.45118955  1.9197088  2.9826703  0.2776046 83.43014  8.82978807   <0.001 ***
## 2       cond: dist0  0.05585770 -0.6062233  0.7179387  0.3464659 98.00000  0.16122133    0.872
## 3         harm: 2F2 -2.02694495 -2.6890259 -1.3648640  0.3464659 98.00000 -5.85034447   <0.001 ***
## 4         harm: 3F2 -1.81929616 -2.4813771 -1.1572152  0.3464659 98.00000 -5.25101052   <0.001 ***
## 5         harm: 4F2 -2.22973040 -2.8918114 -1.5676494  0.3464659 98.00000 -6.43564147   <0.001 ***
## 6 conddist0:harm2F2 -0.02971119 -0.9660351  0.9066127  0.4899768 98.00000 -0.06063794    0.952
## 7 conddist0:harm3F2  0.03414791 -0.9021760  0.9704718  0.4899768 98.00000  0.06969292    0.945
## 8 conddist0:harm4F2 -0.03265164 -0.9689755  0.9036722  0.4899768 98.00000 -0.06663916    0.947
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE df     t.ratio   p.value
## 1 1 dist3 - dist0  1F2 -0.05585770 0.3464659 98 -0.16122133 0.8722510
## 2 2 dist3 - dist0  2F2 -0.02614651 0.3464659 98 -0.07546633 0.9399975
## 3 3 dist3 - dist0  3F2 -0.09000561 0.3464659 98 -0.25978201 0.7955769
## 4 4 dist3 - dist0  4F2 -0.02320605 0.3464659 98 -0.06697933 0.9467346
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance Chisq Chi Df Pr(>Chisq)
## m2  7 351.47 370.98 -168.73   337.47
## m1 10 357.44 385.32 -168.72   337.44 0.026      3     0.9989
```

RLS_CARRIER_RC1_CARR8



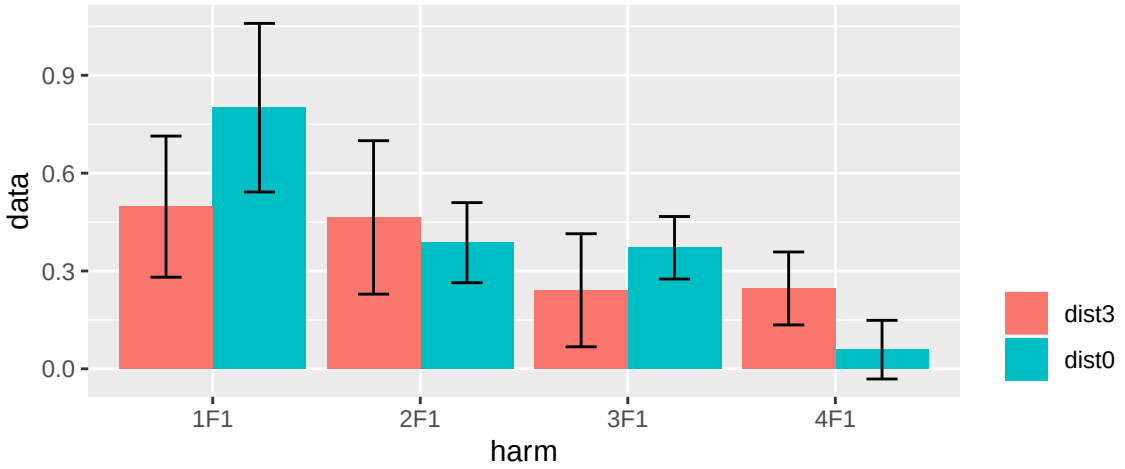

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond        0.227   0.227     1    98  0.2900 0.5914
## harm      116.846  38.949     3    98 49.7334 <2e-16 ***
## cond:harm   0.116   0.039     3    98  0.0496 0.9853
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                         Estimate CI (lower) CI (upper) Std. Error       df    t value Pr(>|t|)
## 1       (Intercept)  2.50775597  2.0139532  3.0015588  0.2579652 84.53558  9.7212968   <0.001 ***
## 2       cond: dist0  0.11772272 -0.4997836  0.7352291  0.3231400 98.00003  0.3643087    0.716
## 3         harm: 2F2 -2.24223087 -2.8597372 -1.6247245  0.3231400 98.00003 -6.9388832   <0.001 ***
## 4         harm: 3F2 -2.10923279 -2.7267391 -1.4917264  0.3231400 98.00003 -6.5273028   <0.001 ***
## 5         harm: 4F2 -2.38580591 -3.0033123 -1.7682996  0.3231400 98.00003 -7.3831953   <0.001 ***
## 6 conddist0:harm2F2  0.05654073 -0.8167451  0.9298266  0.4569890 98.00003  0.1237245    0.902
## 7 conddist0:harm3F2 -0.08731422 -0.9606001  0.7859716  0.4569890 98.00003 -0.1910642    0.849
## 8 conddist0:harm4F2 -0.09206288 -0.9653487  0.7812230  0.4569890 98.00003 -0.2014553    0.841
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate      SE       df     t.ratio   p.value
## 1 1 dist3 - dist0  1F2 -0.11772272 0.32314 98.00003 -0.36430869 0.7164124
## 2 2 dist3 - dist0  2F2 -0.17426345 0.32314 98.00003 -0.53928155 0.5909157
## 3 3 dist3 - dist0  3F2 -0.03040850 0.32314 98.00003 -0.09410316 0.9252193
## 4 4 dist3 - dist0  4F2 -0.02565984 0.32314 98.00003 -0.07940781 0.9368702
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 334.52 354.04 -160.26   320.52
## m1 10 340.37 368.24 -160.18   320.37 0.1592      3     0.9839
```

RLS_CARRIER_RC1_CARR9



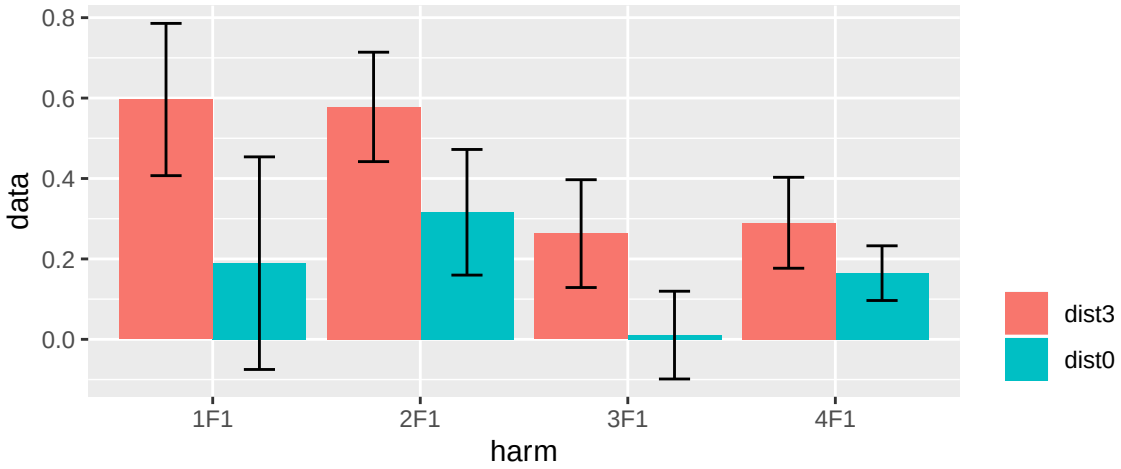

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond        0.009   0.009     1    98  0.0107 0.9178
## harm      129.937  43.312     3    98 52.6147 <2e-16 ***
## cond:harm   0.147   0.049     3    98  0.0595 0.9809
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                         Estimate CI (lower) CI (upper) Std. Error       df     t value Pr(>|t|)
## 1       (Intercept)  2.77833463  2.2759144  3.2807549  0.2625467 86.76387 10.58224861   <0.001 ***
## 2       cond: dist0 -0.02895553 -0.6620549  0.6041439  0.3312999 98.00000 -0.08739974    0.931
## 3         harm: 2F2 -2.41604218 -3.0491416 -1.7829428  0.3312999 98.00000 -7.29261337   <0.001 ***
## 4         harm: 3F2 -2.23677736 -2.8698768 -1.6036780  0.3312999 98.00000 -6.75151811   <0.001 ***
## 5         harm: 4F2 -2.58150232 -3.2146017 -1.9484029  0.3312999 98.00000 -7.79204043   <0.001 ***
## 6 conddist0:harm2F2  0.14970162 -0.7456361  1.0450394  0.4685288 98.00000  0.31951421     0.75
## 7 conddist0:harm3F2  0.06769406 -0.8276437  0.9630318  0.4685288 98.00000  0.14448216    0.885
## 8 conddist0:harm4F2 -0.03301692 -0.9283547  0.8623208  0.4685288 98.00000 -0.07046934    0.944
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE df     t.ratio   p.value
## 1 1 dist3 - dist0  1F2  0.02895553 0.3312999 98  0.08739974 0.9305321
## 2 2 dist3 - dist0  2F2 -0.12074609 0.3312999 98 -0.36446159 0.7162986
## 3 3 dist3 - dist0  3F2 -0.03873853 0.3312999 98 -0.11692889 0.9071557
## 4 4 dist3 - dist0  4F2  0.06197244 0.3312999 98  0.18705844 0.8520015
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance Chisq Chi Df Pr(>Chisq)
## m2  7 339.83 359.34 -162.91   325.83
## m1 10 345.64 373.51 -162.82   325.64 0.191      3      0.979
```

RLS_ODDBALL_RC1_CARR5



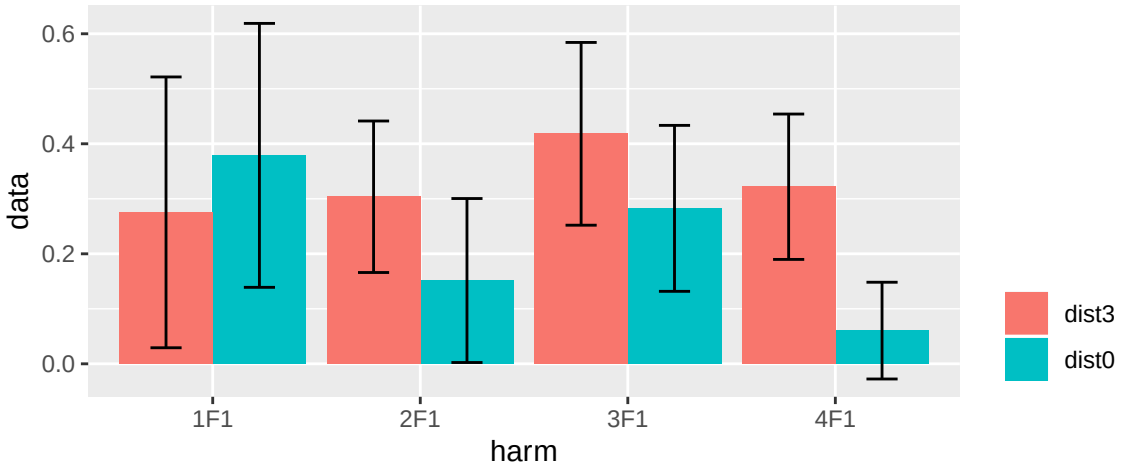

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##           Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond      0.0533 0.05326     1    98  0.1309 0.7183
## harm      3.9468 1.31561     3    98  3.2333 0.0256 *
## cond:harm 1.0736 0.35788     3    98  0.8795 0.4545
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                         Estimate CI (lower) CI (upper) Std. Error      df    t value Pr(>|t|)
## 1       (Intercept)  0.49727395  0.1638106  0.8307373  0.1745742 103.267  2.8484965    0.005  **
## 2       cond: dist0  0.30337351 -0.1417306  0.7484776  0.2329223  98.000  1.3024666    0.196
## 3         harm: 2F1 -0.03303884 -0.4781430  0.4120653  0.2329223  98.000 -0.1418449    0.887
## 4         harm: 3F1 -0.25642463 -0.7015288  0.1886795  0.2329223  98.000 -1.1009020    0.274
## 5         harm: 4F1 -0.25083792 -0.6959421  0.1942662  0.2329223  98.000 -1.0769168    0.284
## 6 conddist0:harm2F1 -0.38082179 -1.0102941  0.2486505  0.3294019  98.000 -1.1561009     0.25
## 7 conddist0:harm3F1 -0.17304849 -0.8025208  0.4564238  0.3294019  98.000 -0.5253415    0.601
## 8 conddist0:harm4F1 -0.49108048 -1.1205528  0.1383918  0.3294019  98.000 -1.4908248    0.139
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE df    t.ratio   p.value
## 1 1 dist3 - dist0  1F1 -0.30337351 0.2329223 98 -1.3024666 0.1958095
## 2 2 dist3 - dist0  2F1  0.07744829 0.2329223 98  0.3325070 0.7402167
## 3 3 dist3 - dist0  3F1 -0.13032502 0.2329223 98 -0.5595215 0.5770825
## 4 4 dist3 - dist0  4F1  0.18770698 0.2329223 98  0.8058781 0.4222643
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 251.46 270.97 -118.73   237.46
## m1 10 254.67 282.54 -117.33   234.67 2.7897      3     0.4252
```

RLS_ODDBALL_RC1_CARR6



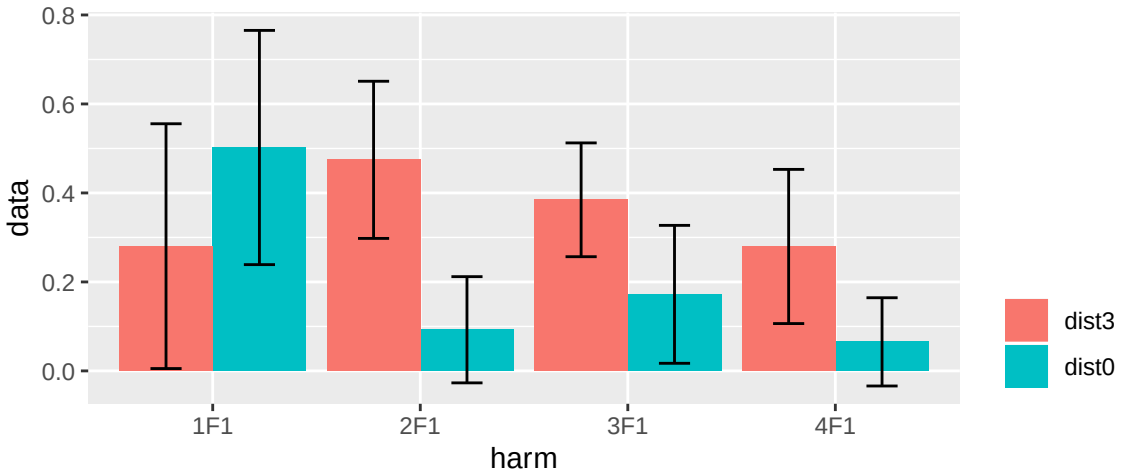

```
## WARNING: BOTH MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value  Pr(>F)
## cond      2.05459 2.05459     1   112  5.5921 0.01976 *
## harm      1.86597 0.62199     3   112  1.6929 0.17260
## cond:harm 0.29843 0.09948     3   112  0.2708 0.84637
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                         Estimate CI (lower) CI (upper) Std. Error  df     t value Pr(>|t|)
## 1       (Intercept)  0.59641175  0.2976819 0.89514161  0.1565047 112  3.81082325   <0.001 ***
## 2       cond: dist0 -0.40698910 -0.8294569 0.01547872  0.2213311 112 -1.83882496    0.069   .
## 3         harm: 2F1 -0.01835591 -0.4408237 0.40411190  0.2213311 112 -0.08293417    0.934
## 4         harm: 3F1 -0.33347156 -0.7559394 0.08899626  0.2213311 112 -1.50666399    0.135
## 5         harm: 4F1 -0.30650999 -0.7289778 0.11595782  0.2213311 112 -1.38484846    0.169
## 6 conddist0:harm2F1  0.14493591 -0.4525238 0.74239562  0.3130094 112  0.46304011    0.644
## 7 conddist0:harm3F1  0.15456912 -0.4428906 0.75202883  0.3130094 112  0.49381623    0.622
## 8 conddist0:harm4F1  0.28165651 -0.3158032 0.87911622  0.3130094 112  0.89983403     0.37
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm  estimate        SE  df   t.ratio   p.value
## 1 1 dist3 - dist0  1F1 0.4069891 0.2213311 112 1.8388250 0.0685902
## 2 2 dist3 - dist0  2F1 0.2620532 0.2213311 112 1.1839874 0.2389248
## 3 3 dist3 - dist0  3F1 0.2524200 0.2213311 112 1.1404634 0.2565262
## 4 4 dist3 - dist0  4F1 0.1253326 0.2213311 112 0.5662675 0.5723449
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 226.98 246.49 -106.49   212.98
## m1 10 232.11 259.99 -106.06   212.11 0.8672      3     0.8333
```

RLS_ODDBALL_RC1_CARR8



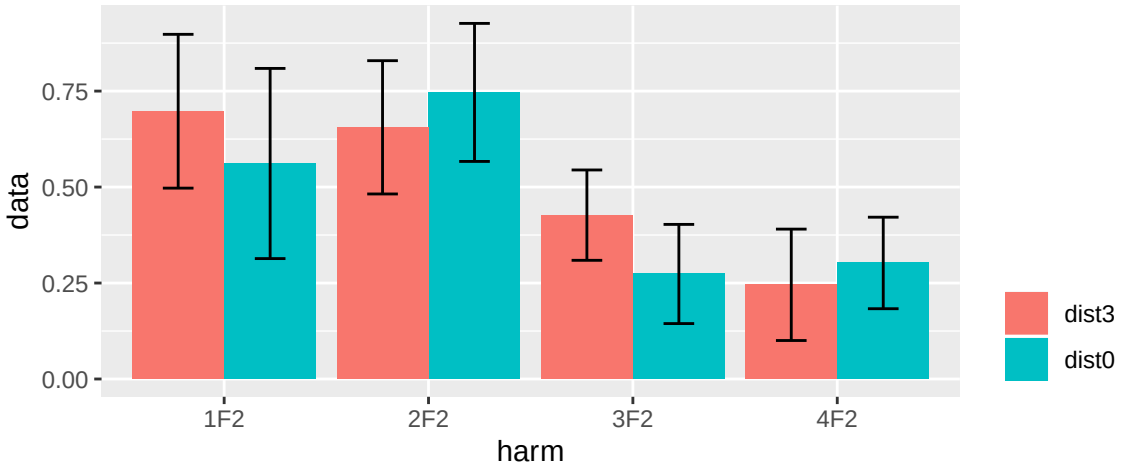

```
## WARNING: BOTH MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond      0.37264 0.37264     1   112  0.8461 0.3596
## harm      0.53040 0.17680     3   112  0.4014 0.7522
## cond:harm 0.53280 0.17760     3   112  0.4033 0.7509
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                         Estimate  CI (lower) CI (upper) Std. Error  df    t value Pr(>|t|)
## 1       (Intercept)  0.27535773 -0.05170841  0.6024239  0.1713501 112  1.6069891    0.111
## 2       cond: dist0  0.10359957 -0.35894180  0.5661409  0.2423256 112  0.4275221     0.67
## 3         harm: 2F1  0.02834508 -0.43419629  0.4908864  0.2423256 112  0.1169710    0.907
## 4         harm: 3F1  0.14276922 -0.31977214  0.6053106  0.2423256 112  0.5891627    0.557
## 5         harm: 4F1  0.04658726 -0.41595411  0.5091286  0.2423256 112  0.1922507    0.848
## 6 conddist0:harm2F1 -0.25588779 -0.91002006  0.3982445  0.3427002 112 -0.7466812    0.457
## 7 conddist0:harm3F1 -0.23911388 -0.89324616  0.4150184  0.3427002 112 -0.6977349    0.487
## 8 conddist0:harm4F1 -0.36520342 -1.01933569  0.2889289  0.3427002 112 -1.0656645    0.289
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm   estimate        SE  df    t.ratio   p.value
## 1 1 dist3 - dist0  1F1 -0.1035996 0.2423256 112 -0.4275221 0.6698199
## 2 2 dist3 - dist0  2F1  0.1522882 0.2423256 112  0.6284446 0.5309923
## 3 3 dist3 - dist0  3F1  0.1355143 0.2423256 112  0.5592240 0.5771254
## 4 4 dist3 - dist0  4F1  0.2616038 0.2423256 112  1.0795550 0.2826597
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 249.15 268.66 -117.58   235.15
## m1 10 253.86 281.74 -116.93   233.86 1.2892      3     0.7317
```

RLS_ODDBALL_RC1_CARR9



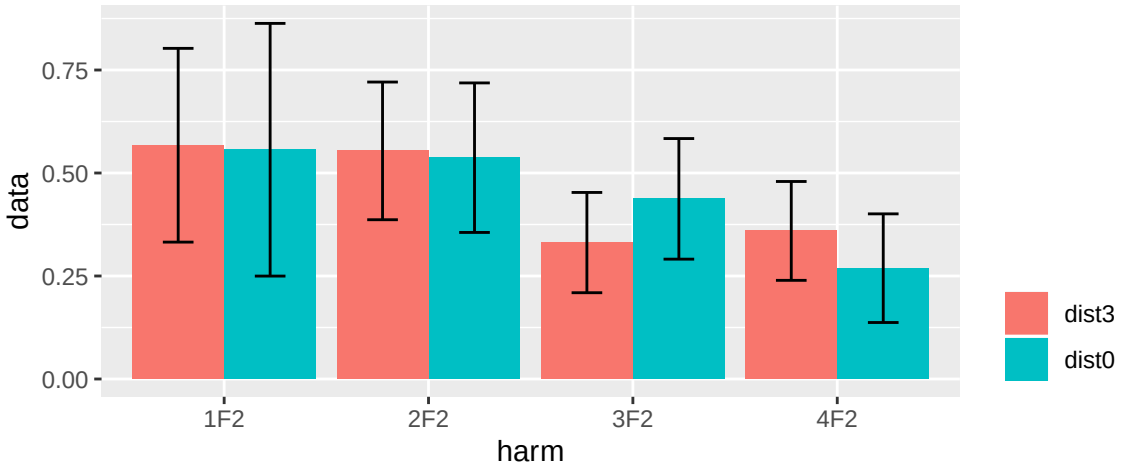

```
## WARNING: BOTH MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond      0.64600 0.64600     1   112  1.2730 0.2616
## harm      0.71837 0.23946     3   112  0.4719 0.7025
## cond:harm 1.49970 0.49990     3   112  0.9851 0.4025
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                          Estimate  CI (lower) CI (upper) Std. Error  df     t value Pr(>|t|)
## 1       (Intercept)  0.2803709624 -0.07070649 0.63144841  0.1839296 112  1.52433823     0.13
## 2       cond: dist0  0.2217288114 -0.27476968 0.71822730  0.2601158 112  0.85242355    0.396
## 3         harm: 2F1  0.1940217465 -0.30247674 0.69052023  0.2601158 112  0.74590535    0.457
## 4         harm: 3F1  0.1041681354 -0.39233035 0.60066662  0.2601158 112  0.40046835     0.69
## 5         harm: 4F1 -0.0007255279 -0.49722402 0.49577296  0.2601158 112 -0.00278925    0.998
## 6 conddist0:harm2F1 -0.6036343331 -1.30578923 0.09852056  0.3678593 112 -1.64093828    0.104
## 7 conddist0:harm3F1 -0.4341487748 -1.13630367 0.26800612  0.3678593 112 -1.18020349     0.24
## 8 conddist0:harm4F1 -0.4361014528 -1.13825635 0.26605344  0.3678593 112 -1.18551171    0.238
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm   estimate        SE  df    t.ratio   p.value
## 1 1 dist3 - dist0  1F1 -0.2217288 0.2601158 112 -0.8524236 0.3957982
## 2 2 dist3 - dist0  2F1  0.3819055 0.2601158 112  1.4682136 0.1448491
## 3 3 dist3 - dist0  3F1  0.2124200 0.2601158 112  0.8166362 0.4158700
## 4 4 dist3 - dist0  4F1  0.2143726 0.2601158 112  0.8241432 0.4116098
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 267.99 287.50 -127.00   253.99
## m1 10 270.86 298.74 -125.43   250.86 3.1254      3     0.3727
```

RLS_CARRIER_RC2_CARR5

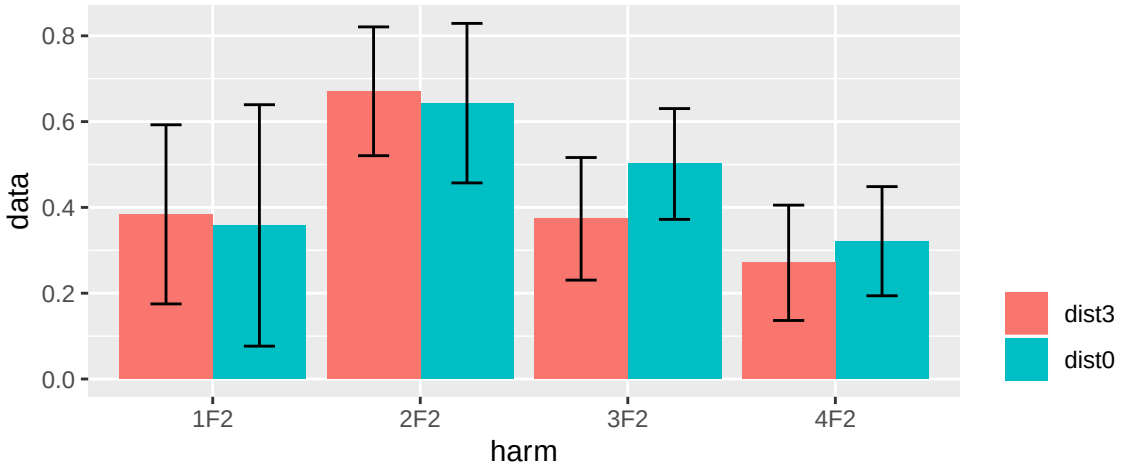



```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##           Sum Sq Mean Sq NumDF DenDF F value   Pr(>F)
## cond      0.0376 0.03755     1    98  0.1386 0.710455
## harm      3.9083 1.30277     3    98  4.8092 0.003625 **
## cond:harm 0.3640 0.12133     3    98  0.4479 0.719337
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                         Estimate CI (lower)  CI (upper) Std. Error       df     t value Pr(>|t|)
## 1       (Intercept)  0.69752469  0.3712555  1.02379385  0.1694655 57.01678  4.11602743   <0.001 ***
## 2       cond: dist0 -0.13614598 -0.4993210  0.22702904  0.1900489 98.00000 -0.71637339    0.475
## 3         harm: 2F2 -0.04191521 -0.4050902  0.32125982  0.1900489 98.00000 -0.22054960    0.826
## 4         harm: 3F2 -0.27067596 -0.6338510  0.09249907  0.1900489 98.00000 -1.42424365    0.158
## 5         harm: 4F2 -0.45219143 -0.8153665 -0.08901640  0.1900489 98.00000 -2.37934236    0.019   *
## 6 conddist0:harm2F2  0.22709782 -0.2865092  0.74070487  0.2687698 98.00000  0.84495304      0.4
## 7 conddist0:harm3F2 -0.01711847 -0.5307255  0.49648858  0.2687698 98.00000 -0.06369196    0.949
## 8 conddist0:harm4F2  0.19308483 -0.3205222  0.70669188  0.2687698 98.00000  0.71840240    0.474
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE df    t.ratio   p.value
## 1 1 dist3 - dist0  1F2  0.13614598 0.1900489 98  0.7163734 0.4754645
## 2 2 dist3 - dist0  2F2 -0.09095183 0.1900489 98 -0.4785707 0.6333101
## 3 3 dist3 - dist0  3F2  0.15326446 0.1900489 98  0.8064474 0.4219376
## 4 4 dist3 - dist0  4F2 -0.05693885 0.1900489 98 -0.2996010 0.7651160
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 217.13 236.65 -101.57   203.13
## m1 10 221.71 249.58 -100.85   201.71 1.4299      3     0.6985
```

RLS_CARRIER_RC2_CARR6

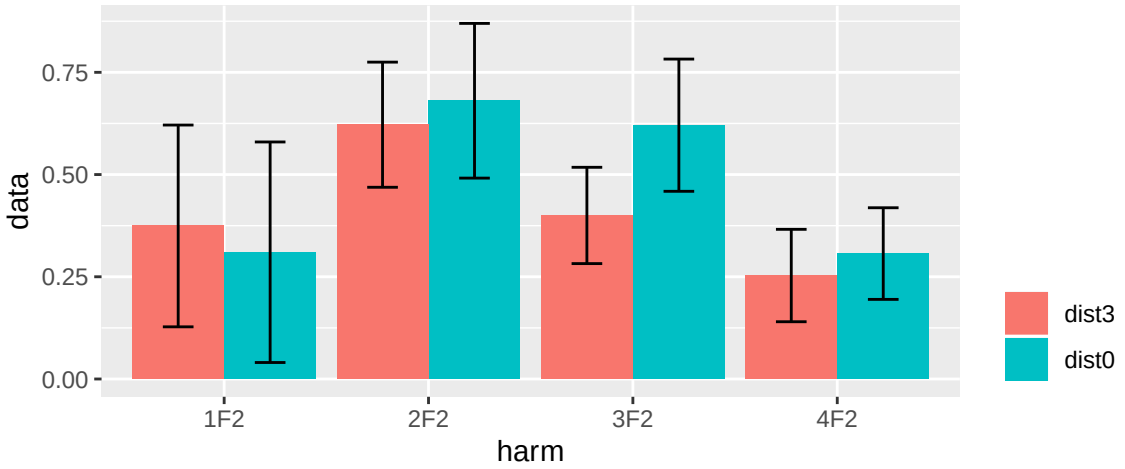



```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond      0.00026 0.00026     1    98  0.0007 0.9797
## harm      1.33219 0.44406     3    98  1.1150 0.3468
## cond:harm 0.14865 0.04955     3    98  0.1244 0.9455
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                          Estimate CI (lower) CI (upper) Std. Error       df     t value Pr(>|t|)
## 1       (Intercept)  0.567451912  0.2102642  0.9246396  0.1864852 80.48625  3.04287908    0.003  **
## 2       cond: dist0 -0.010950873 -0.4513161  0.4294144  0.2304425 98.00000 -0.04752108    0.962
## 3         harm: 2F2 -0.013733982 -0.4540993  0.4266313  0.2304425 98.00000 -0.05959831    0.953
## 4         harm: 3F2 -0.236341629 -0.6767069  0.2040236  0.2304425 98.00000 -1.02559935    0.308
## 5         harm: 4F2 -0.207990933 -0.6483562  0.2323743  0.2304425 98.00000 -0.90257212    0.369
## 6 conddist0:harm2F2 -0.005574668 -0.6283452  0.6171959  0.3258948 98.00000 -0.01710573    0.986
## 7 conddist0:harm3F2  0.117139069 -0.5056315  0.7399096  0.3258948 98.00000  0.35943824     0.72
## 8 conddist0:harm4F2 -0.079525442 -0.7022960  0.5432451  0.3258948 98.00000 -0.24402179    0.808
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE df     t.ratio   p.value
## 1 1 dist3 - dist0  1F2  0.01095087 0.2304425 98  0.04752108 0.9621946
## 2 2 dist3 - dist0  2F2  0.01652554 0.2304425 98  0.07171223 0.9429771
## 3 3 dist3 - dist0  3F2 -0.10618820 0.2304425 98 -0.46080136 0.6459621
## 4 4 dist3 - dist0  4F2  0.09047632 0.2304425 98  0.39262000 0.6954528
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 254.89 274.40 -120.44   240.89
## m1 10 260.49 288.37 -120.25   240.49 0.3991      3     0.9404
```



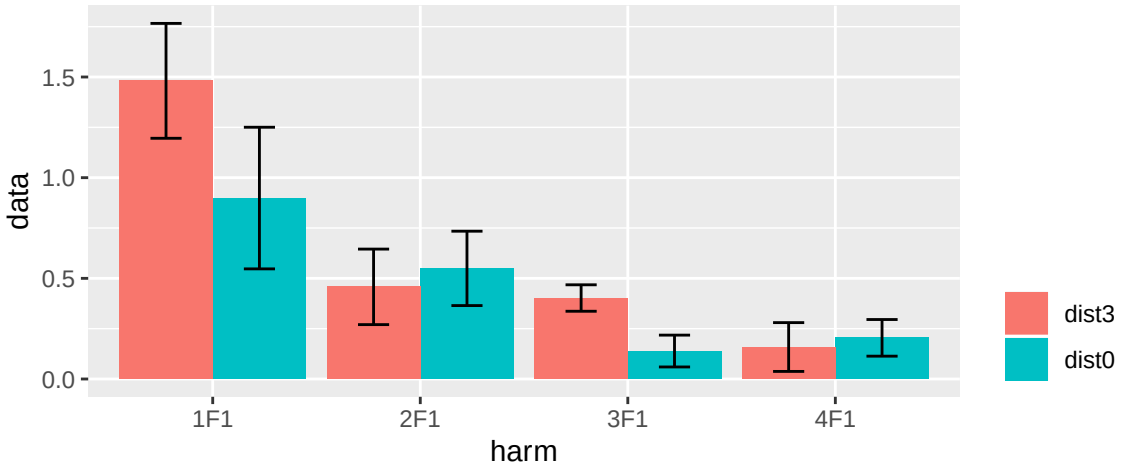

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value Pr(>F)
## cond      0.02917 0.02917     1    98  0.1006 0.7518
## harm      2.17587 0.72529     3    98  2.5020 0.0638 .
## cond:harm 0.12309 0.04103     3    98  0.1415 0.9349
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                          Estimate  CI (lower) CI (upper) Std. Error       df      t value Pr(>|t|)
## 1       (Intercept)  0.383805732  0.04238367  0.7252278  0.1772219 55.01433  2.165679106    0.035   *
## 2       cond: dist0 -0.025805359 -0.40150022  0.3498895  0.1966005 98.00003 -0.131257871    0.896
## 3         harm: 2F2  0.286865439 -0.08882942  0.6625603  0.1966005 98.00003  1.459128942    0.148
## 4         harm: 3F2 -0.010377108 -0.38607196  0.3653177  0.1966005 98.00003 -0.052782722    0.958
## 5         harm: 4F2 -0.112966102 -0.48866096  0.2627288  0.1966005 98.00003 -0.574597309    0.567
## 6 conddist0:harm2F2 -0.001848825 -0.53316159  0.5294639  0.2780351 98.00003 -0.006649611    0.995
## 7 conddist0:harm3F2  0.153600826 -0.37771194  0.6849136  0.2780351 98.00003  0.552451295    0.582
## 8 conddist0:harm4F2  0.076191607 -0.45512115  0.6075044  0.2780351 98.00003  0.274035977    0.785
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE       df    t.ratio   p.value
## 1 1 dist3 - dist0  1F2  0.02580536 0.1966005 98.00003  0.1312579 0.8958404
## 2 2 dist3 - dist0  2F2  0.02765418 0.1966005 98.00003  0.1406618 0.8884258
## 3 3 dist3 - dist0  3F2 -0.12779547 0.1966005 98.00003 -0.6500262 0.5171961
## 4 4 dist3 - dist0  4F2 -0.05038625 0.1966005 98.00003 -0.2562875 0.7982661
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance Chisq Chi Df Pr(>Chisq)
## m2  7 225.01 244.52 -105.50   211.01
## m1 10 230.55 258.43 -105.28   210.55 0.454      3     0.9289
```

RLS_CARRIER_RC2_CARR9



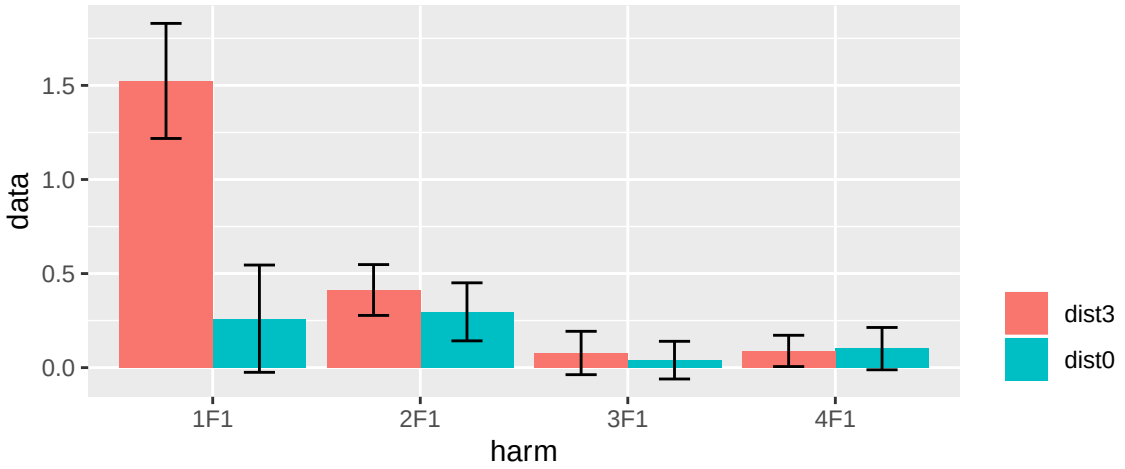

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value  Pr(>F)
## cond      0.13544 0.13544     1    98  0.5185 0.47318
## harm      2.53914 0.84638     3    98  3.2404 0.02538 *
## cond:harm 0.30853 0.10284     3    98  0.3937 0.75777
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                         Estimate  CI (lower) CI (upper) Std. Error       df    t value Pr(>|t|)
## 1       (Intercept)  0.37435852  0.02685786  0.7218592  0.1796528 45.08253  2.0837889    0.043   *
## 2       cond: dist0 -0.06431504 -0.42093126  0.2923012  0.1866167 98.00001 -0.3446371    0.731
## 3         harm: 2F2  0.24761017 -0.10900605  0.6042264  0.1866167 98.00001  1.3268383    0.188
## 4         harm: 3F2  0.02563784 -0.33097837  0.3822541  0.1866167 98.00001  0.1373824    0.891
## 5         harm: 4F2 -0.12130628 -0.47792250  0.2353099  0.1866167 98.00001 -0.6500291    0.517
## 6 conddist0:harm2F2  0.12290292 -0.38142858  0.6272344  0.2639159 98.00001  0.4656898    0.642
## 7 conddist0:harm3F2  0.28508936 -0.21924214  0.7894209  0.2639159 98.00001  1.0802282    0.283
## 8 conddist0:harm4F2  0.11803200 -0.38629949  0.6223635  0.2639159 98.00001  0.4472335    0.656
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE       df    t.ratio   p.value
## 1 1 dist3 - dist0  1F2  0.06431504 0.1866167 98.00001  0.3446371 0.7311057
## 2 2 dist3 - dist0  2F2 -0.05858788 0.1866167 98.00001 -0.3139477 0.7542281
## 3 3 dist3 - dist0  3F2 -0.22077432 0.1866167 98.00001 -1.1830363 0.2396568
## 4 4 dist3 - dist0  4F2 -0.05371696 0.1866167 98.00001 -0.2878465 0.7740721
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance Chisq Chi Df Pr(>Chisq)
## m2  7 217.29 236.80 -101.64   203.29
## m1 10 222.03 249.91 -101.02   202.03 1.258      3     0.7391
```

RLS_ODDBALL_RC2_CARR5



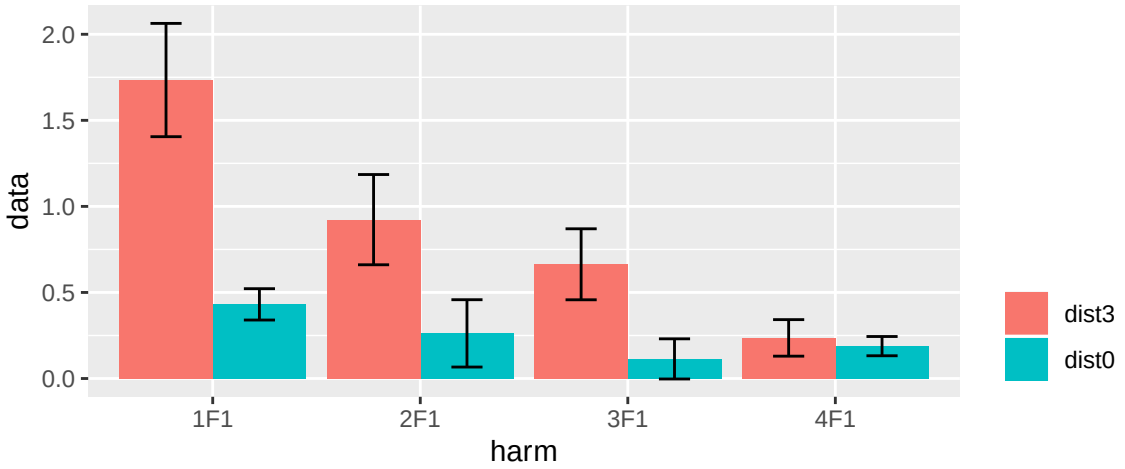

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
## cond       0.9407  0.9407     1    98  2.1590    0.1449
## harm      18.7394  6.2465     3    98 14.3362 8.122e-08 ***
## cond:harm  2.2007  0.7336     3    98  1.6836    0.1755
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                        Estimate  CI (lower) CI (upper) Std. Error       df    t value Pr(>|t|)
## 1       (Intercept)  1.4810029  1.10510456  1.8569011  0.1962009 78.78431  7.5483980   <0.001 ***
## 2       cond: dist0 -0.5822496 -1.04284619 -0.1216530  0.2410294 98.00002 -2.4156782    0.018   *
## 3         harm: 2F1 -1.0233181 -1.48391473 -0.5627215  0.2410294 98.00002 -4.2456146   <0.001 ***
## 4         harm: 3F1 -1.0787972 -1.53939382 -0.6182006  0.2410294 98.00002 -4.4757902   <0.001 ***
## 5         harm: 4F1 -1.3221266 -1.78272321 -0.8615300  0.2410294 98.00002 -5.4853324   <0.001 ***
## 6 conddist0:harm2F1  0.6739846  0.02260258  1.3253665  0.3408671 98.00002  1.9772649    0.051   .
## 7 conddist0:harm3F1  0.3189150 -0.33246693  0.9702970  0.3408671 98.00002  0.9355994    0.352
## 8 conddist0:harm4F1  0.6277833 -0.02359870  1.2791653  0.3408671 98.00002  1.8417244    0.069   .
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE       df    t.ratio    p.value
## 1 1 dist3 - dist0  1F1  0.58224957 0.2410294 98.00002  2.4156782 0.01755864
## 2 2 dist3 - dist0  2F1 -0.09173498 0.2410294 98.00002 -0.3805966 0.70432635
## 3 3 dist3 - dist0  3F1  0.26333453 0.2410294 98.00002  1.0925409 0.27727392
## 4 4 dist3 - dist0  4F1 -0.04553371 0.2410294 98.00002 -0.1889135 0.85055131
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 271.07 290.58 -128.54   257.07
## m1 10 271.80 299.67 -125.90   251.80 5.2766      3     0.1526
```

RLS_ODDBALL_RC2_CARR6



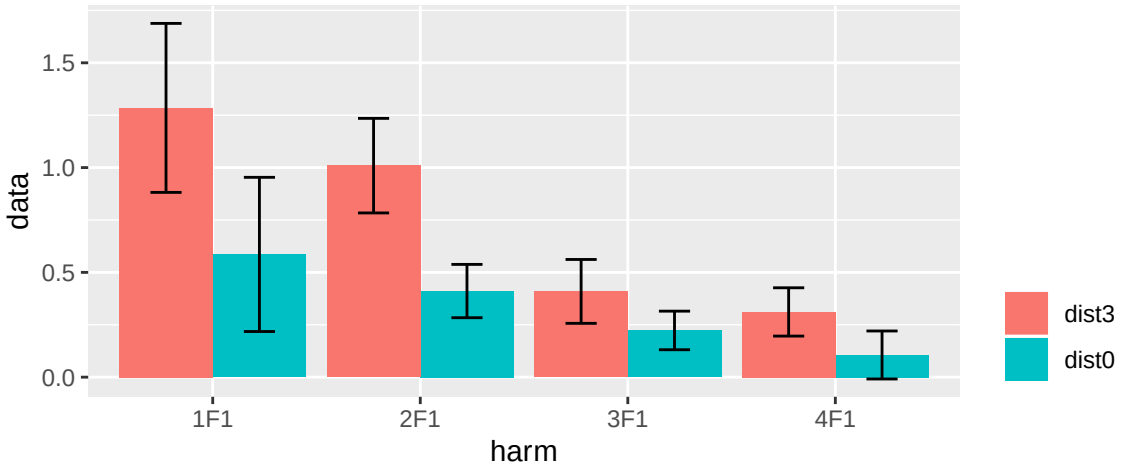

```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
## cond       3.7043  3.7043     1    98  7.8819 0.0060257 **
## harm      13.3084  4.4361     3    98  9.4390 1.545e-05 ***
## cond:harm  8.3835  2.7945     3    98  5.9460 0.0009081 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                       Estimate CI (lower) CI (upper) Std. Error      df   t value Pr(>|t|)
## 1       (Intercept)  1.523762  1.1798626  1.8676622  0.1801564 111.067  8.457996   <0.001 ***
## 2       cond: dist0 -1.263576 -1.7419413 -0.7852108  0.2503278  98.000 -5.047686   <0.001 ***
## 3         harm: 2F1 -1.111118 -1.5894835 -0.6327529  0.2503278  98.000 -4.438653   <0.001 ***
## 4         harm: 3F1 -1.445904 -1.9242689 -0.9675383  0.2503278  98.000 -5.776041   <0.001 ***
## 5         harm: 4F1 -1.434947 -1.9133128 -0.9565822  0.2503278  98.000 -5.732274   <0.001 ***
## 6 conddist0:harm2F1  1.147468  0.4709571  1.8239785  0.3540170  98.000  3.241279    0.002  **
## 7 conddist0:harm3F1  1.225476  0.5489651  1.9019864  0.3540170  98.000  3.461630    0.001 ***
## 8 conddist0:harm4F1  1.275788  0.5992775  1.9522988  0.3540170  98.000  3.603749   <0.001 ***
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm    estimate        SE df     t.ratio      p.value
## 1 1 dist3 - dist0  1F1  1.26357605 0.2503278 98  5.04768576 2.063251e-06
## 2 2 dist3 - dist0  2F1  0.11610827 0.2503278 98  0.46382492 6.438018e-01
## 3 3 dist3 - dist0  3F1  0.03810032 0.2503278 98  0.15220173 8.793407e-01
## 4 4 dist3 - dist0  4F1 -0.01221210 0.2503278 98 -0.04878444 9.611904e-01
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 277.00 296.51 -131.50   263.00
## m1 10 265.44 293.32 -122.72   245.44 17.559      3  0.0005424 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

RLS_ODDBALL_RC2_CARR8




```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value    Pr(>F)
## cond      12.3031 12.3031     1    98 26.5426 1.335e-06 ***
## harm      12.7236  4.2412     3    98  9.1499 2.141e-05 ***
## cond:harm  5.9929  1.9976     3    98  4.3097  0.006711 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                        Estimate  CI (lower) CI (upper) Std. Error       df   t value Pr(>|t|)
## 1       (Intercept)  1.7341271  1.36754272  2.1007114  0.1917556 95.05046  9.043423   <0.001 ***
## 2       cond: dist0 -1.3032447 -1.77831153 -0.8281778  0.2486017 98.00000 -5.242299   <0.001 ***
## 3         harm: 2F1 -0.8111254 -1.28619232 -0.3360586  0.2486017 98.00000 -3.262750    0.002  **
## 4         harm: 3F1 -1.0705177 -1.54558460 -0.5954508  0.2486017 98.00000 -4.306155   <0.001 ***
## 5         harm: 4F1 -1.4980863 -1.97315317 -1.0230194  0.2486017 98.00000 -6.026049   <0.001 ***
## 6 conddist0:harm2F1  0.6425213 -0.02932475  1.3143673  0.3515760 98.00000  1.827546    0.071   .
## 7 conddist0:harm3F1  0.7535531  0.08170711  1.4253991  0.3515760 98.00000  2.143358    0.035   *
## 8 conddist0:harm4F1  1.2553356  0.58348961  1.9271816  0.3515760 98.00000  3.570596    0.001 ***
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm   estimate        SE df  t.ratio      p.value
## 1 1 dist3 - dist0  1F1 1.30324466 0.2486017 98 5.242299 9.126465e-07
## 2 2 dist3 - dist0  2F1 0.66072339 0.2486017 98 2.657758 9.186476e-03
## 3 3 dist3 - dist0  3F1 0.54969153 0.2486017 98 2.211133 2.935142e-02
## 4 4 dist3 - dist0  4F1 0.04790903 0.2486017 98 0.192714 8.475818e-01
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 280.87 300.38 -133.44   266.87
## m1 10 273.86 301.73 -126.93   253.86 13.012      3   0.004611 **
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

RLS_ODDBALL_RC2_CARR9




```
## LOVELY: NONE OF THE MODELS ARE SINGULAR!   LOVELY: BOTH MODELS CONVERGED!
##
## ANOVA TEST FOR MAIN EFFECTS AND INTERACTIONS
## Type III Analysis of Variance Table with Satterthwaite's method
##            Sum Sq Mean Sq NumDF DenDF F value   Pr(>F)
## cond       5.3501  5.3501     1    98  8.3706 0.004699 **
## harm      10.3552  3.4517     3    98  5.4005 0.001759 **
## cond:harm  1.5780  0.5260     3    98  0.8230 0.484275
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## SUMMARY AND POST-HOC TESTS, harm1 baseline
##                        Estimate CI (lower) CI (upper) Std. Error       df    t value Pr(>|t|)
## 1       (Intercept)  1.2848253  0.8448368  1.7248138  0.2299765 88.57985  5.5867688   <0.001 ***
## 2       cond: dist0 -0.6991613 -1.2570184 -0.1413043  0.2919257 98.00000 -2.3949975    0.019   *
## 3         harm: 2F1 -0.2755610 -0.8334181  0.2822960  0.2919257 98.00000 -0.9439424    0.348
## 4         harm: 3F1 -0.8756477 -1.4335047 -0.3177907  0.2919257 98.00000 -2.9995567    0.003  **
## 5         harm: 4F1 -0.9736213 -1.5314783 -0.4157642  0.2919257 98.00000 -3.3351680    0.001  **
## 6 conddist0:harm2F1  0.1008081 -0.6881208  0.8897371  0.4128453 98.00000  0.2441790    0.808
## 7 conddist0:harm3F1  0.5129034 -0.2760256  1.3018323  0.4128453 98.00000  1.2423621    0.217
## 8 conddist0:harm4F1  0.4937404 -0.2951886  1.2826694  0.4128453 98.00000  1.1959454    0.235
##
## ESTIMATED MARGINAL MEANS, SIMPLE MAIN EFFECTS OF CONDITION WITHOUT CORRECTION
##          contrast harm  estimate        SE df   t.ratio    p.value
## 1 1 dist3 - dist0  1F1 0.6991613 0.2919257 98 2.3949975 0.01852097
## 2 2 dist3 - dist0  2F1 0.5983532 0.2919257 98 2.0496763 0.04306738
## 3 3 dist3 - dist0  3F1 0.1862580 0.2919257 98 0.6380321 0.52494087
## 4 4 dist3 - dist0  4F1 0.2054209 0.2919257 98 0.7036753 0.48330354
##
## TEST OF WHETHER OR NOT THE INTERACTION PROVIDES A BETTER FIT
## Data: cur_data
## Models:
## m2: data ~ cond + harm + (1 | subject)
## m1: data ~ cond * harm + (1 | subject)
##    Df    AIC    BIC  logLik deviance  Chisq Chi Df Pr(>Chisq)
## m2  7 311.29 330.80 -148.65   297.29
## m1 10 314.68 342.55 -147.34   294.68 2.6125      3     0.4553
```