Advanced Analysis

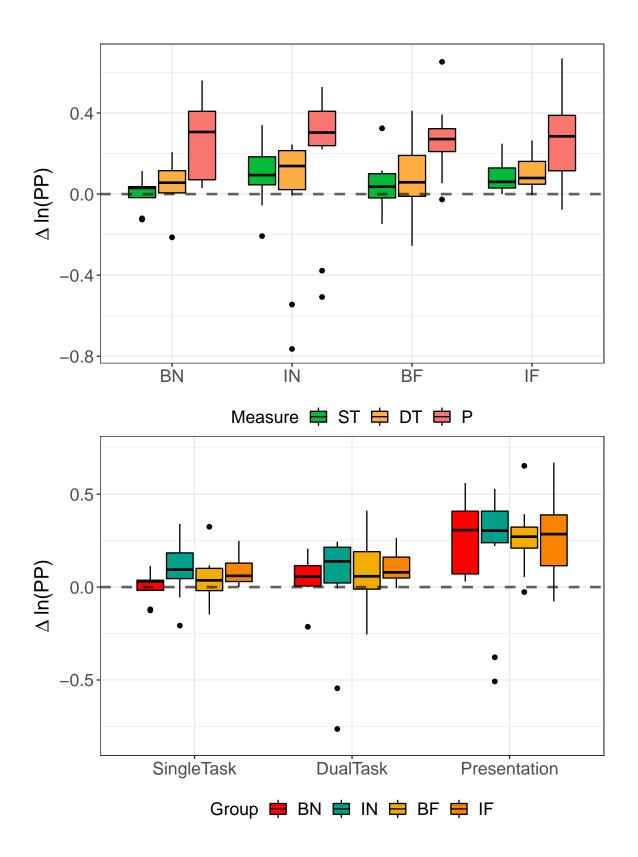
PP, 4 Groups:

Stress Levels Across Activities

```
Our Linear Model:
```

```
\Delta ln(\bar{PP}) = 1 + Group + Activity + 1|Subject
```

```
## Linear mixed-effects model fit by REML
## Data: diff_df
##
          AIC
                    BIC
                          logLik
##
    -117.0021 -88.16606 67.50106
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept) Residual
##
## StdDev: 0.1497218 0.1235458
##
## Fixed effects: PP ~ 1 + Group + Activity
##
                    Value Std.Error DF
                                         t-value p-value
## (Intercept) 0.01067053 0.05357686 138 0.199163 0.8424
## GroupIN 0.04150181 0.06832174 44 0.607447 0.5467
## GroupBF
               0.05580862 0.07251861 44 0.769577 0.4457
## GroupIF
             0.08640404 0.06621580 44 1.304886 0.1987
## ActivityB
              -0.04418403 0.02521869 138 -1.752035 0.0820
## ActivityDT 0.00053512 0.02521869 138 0.021219 0.9831
## ActivityP
               0.19419465 0.02574954 138 7.541674 0.0000
## Correlation:
             (Intr) GropIN GropBF GropIF ActvtB ActvDT
##
## GroupIN
             -0.720
## GroupBF
             -0.678 0.532
## GroupIF
             -0.742 0.583 0.549
## ActivityB -0.235 0.000 0.000 0.000
## ActivityDT -0.235 0.000 0.000 0.000 0.500
## ActivityP -0.228 0.003 -0.006 -0.006 0.490 0.490
## Standardized Within-Group Residuals:
                       Q1
                                 Med
                                              QЗ
                                                         Max
## -3.34479580 -0.43416494 -0.09424565 0.40961423 2.43702855
##
## Number of Observations: 189
## Number of Groups: 48
```

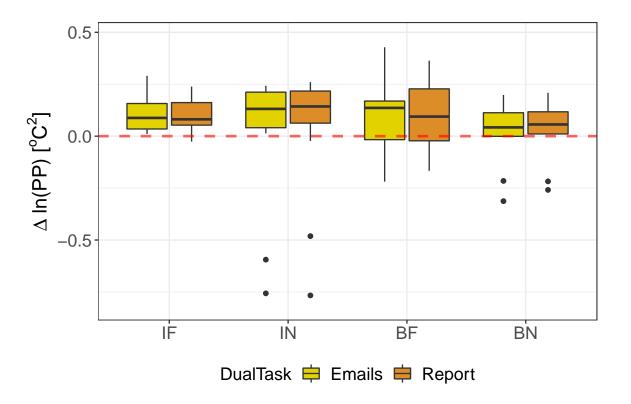


Stress Levels for Dual Task

Our Linear Model:

```
\Delta ln(\bar{PP}) = 1 + Group + DualTask + 1|Subject
```

```
## Linear mixed-effects model fit by REML
## Data: total_df
##
          AIC
                    BIC
                          logLik
##
    -163.3754 -145.9549 88.68768
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept)
                        Residual
## StdDev: 0.2012961 0.02539385
##
## Fixed effects: PP ~ 1 + Group + DualTask
##
                      Value Std.Error DF
                                            t-value p-value
## (Intercept)
                 0.01532439 0.06396183 46 0.2395865 0.8117
## GroupIN
                 0.01031007 0.08500583 43 0.1212867 0.9040
## GroupBF
                 0.06525046 0.09285643 43 0.7027026 0.4860
                 0.08618361 0.08250511 43 1.0445852 0.3021
## GroupIF
## DualTaskReport 0.00859750 0.00523835 46 1.6412602 0.1076
## Correlation:
##
                  (Intr) GropIN GropBF GropIF
## GroupIN
                 -0.751
## GroupBF
                 -0.688 0.517
## GroupIF
                 -0.774 0.582 0.533
## DualTaskReport -0.041 0.000 0.000 0.000
##
## Standardized Within-Group Residuals:
         \mathtt{Min}
                     Q1
                               Med
                                           QЗ
## -2.2359436 -0.3659408 0.0184483 0.3800783 1.8829193
## Number of Observations: 94
## Number of Groups: 47
```



```
## Paired t-test
## For IF, p = 0.5849 > 0.05
## Paired t-test
## For IN, p = 0.2818 > 0.05
## Paired t-test
## For BF, p = 0.6532 > 0.05
```

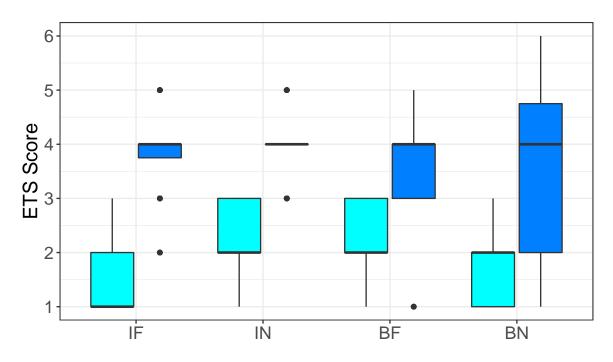
Paired t-test
For BN, p = 0.2855 > 0.05

Linear Modelling for Writing Quality

Our Linear Model:

WritingQuality = 1 + Group + Activity + 1|Subject

```
## Linear mixed-effects model fit by REML
## Data: full_df
##
         AIC
                  BIC
                         logLik
##
    813.3664 841.2186 -399.6832
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept) Residual
##
## StdDev: 0.7425565 0.5501094
##
## Fixed effects: Score ~ 1 + Group + Activity
                  Value Std.Error DF t-value p-value
## (Intercept) 1.6620758 0.2333235 347 7.12348 0.0000
## GroupIN
           0.4165634 0.3053110 48 1.36439 0.1788
## GroupBF
             0.4114557 0.3216693 48 1.27913 0.2070
## GroupIF
              0.1325876 0.3107867 48 0.42662 0.6716
## ActivityDT 1.8450000 0.0550109 347 33.53878 0.0000
## Correlation:
##
             (Intr) GropIN GropBF GropIF
## GroupIN
             -0.754
## GroupBF
             -0.715 0.547
## GroupIF
             -0.740 0.566 0.537
## ActivityDT -0.118 0.000 0.000 0.000
## Standardized Within-Group Residuals:
          Min
                       Q1
                            Med
                                              QЗ
## -2.68842517 -0.71212271 -0.01163681 0.74268533 2.48327321
## Number of Observations: 400
## Number of Groups: 52
```



Activity 🖨 ST ᄇ DT

Activity	Group	n
ST	BN	46
ST	IN	59
ST	BF	43
ST	IF	52
DT	BN	46
DT	IN	59
DT	BF	43
DT	IF	52

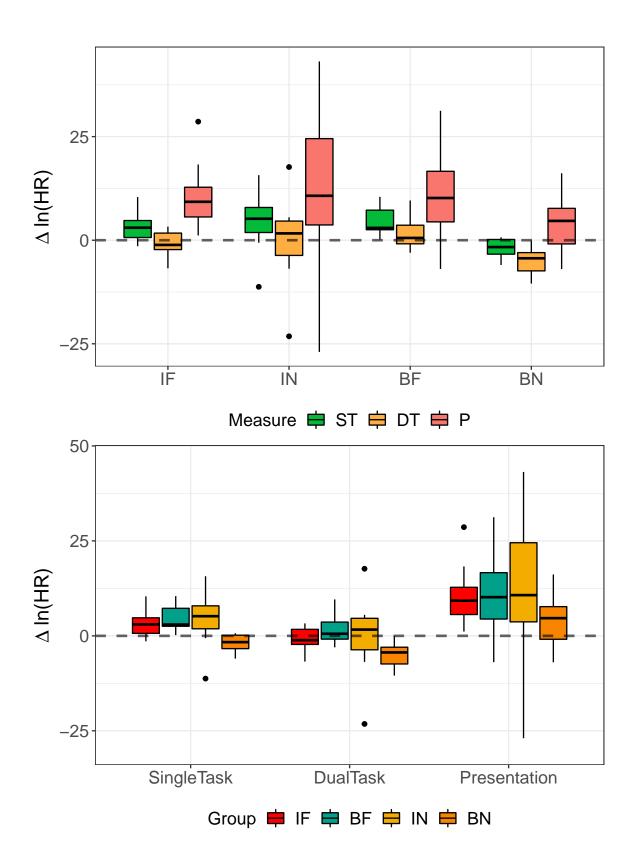
HR, 4 Groups:

Stress Levels Across Activities

Our Linear Model:

```
\Delta \bar{HR} = 1 + Group + Activity + 1|Subject
```

```
## Linear mixed-effects model fit by REML
## Data: diff_df
##
         AIC
                  BIC
                         logLik
##
    1254.437 1283.273 -618.2186
##
## Random effects:
## Formula: ~1 | Subject
##
          (Intercept) Residual
## StdDev:
             4.97023 5.689257
##
## Fixed effects: HR ~ 1 + Group + Activity
                  Value Std.Error DF t-value p-value
## (Intercept) -0.885644 2.046130 137 -0.432838 0.6658
## GroupIN 4.278192 2.467344 45 1.733926 0.0898
## GroupBF
               6.069422 2.430091 45 2.497611 0.0162
## GroupIF
              4.094181 2.590288 45 1.580589 0.1210
## ActivityB -2.462404 1.149404 137 -2.142332 0.0339
## ActivityDT -3.730290 1.149404 137 -3.245413 0.0015
             7.202201 1.207142 137 5.966327 0.0000
## ActivityP
## Correlation:
             (Intr) GropIN GropBF GropIF ActvtB ActvDT
##
## GroupIN
             -0.734
## GroupBF
             -0.744 0.618
## GroupIF
             -0.698 0.580 0.589
## ActivityB -0.281 0.000 0.000 0.000
## ActivityDT -0.281 0.000 0.000 0.000 0.500
## ActivityP -0.260 -0.001 -0.013 -0.010 0.476 0.476
## Standardized Within-Group Residuals:
                       Q1
                                 Med
                                              QЗ
## -3.59568167 -0.40905907 0.02708004 0.35913603 4.51555818
##
## Number of Observations: 189
## Number of Groups: 49
```

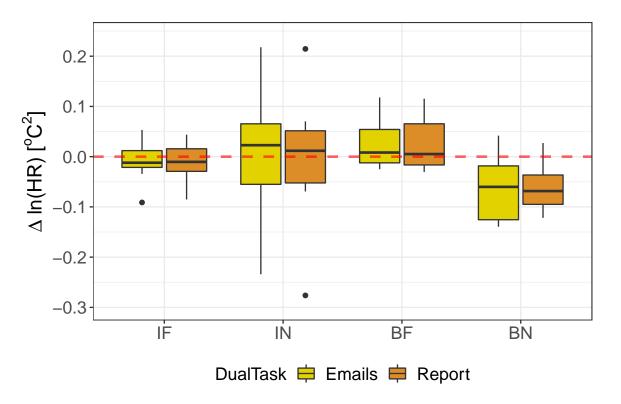


Stress Levels for Dual Task

Number of Observations: 96

Number of Groups: 48

```
Our Linear Model:
                      \Delta \bar{HR} = 1 + Group + DualTask + 1|Subject
## Linear mixed-effects model fit by REML
## Data: total_df
##
          AIC
                    BIC
                           logLik
##
     -312.3311 -294.7551 163.1655
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept)
                        Residual
## StdDev: 0.06913645 0.01468389
##
## Fixed effects: HR ~ 1 + Group + DualTask
##
                       Value Std.Error DF
                                               t-value p-value
## (Intercept)
                 -0.06062827 0.023352067 47 -2.5962698 0.0125
## GroupIN
                  0.06472257 0.029869574 44 2.1668393 0.0357
## GroupBF
                  0.08704844 0.029869574 44 2.9142846 0.0056
## GroupIF
                  0.05357653 0.031423010 44 1.7050094 0.0952
## DualTaskReport -0.00287140 0.002997337 47 -0.9579828 0.3430
## Correlation:
##
                  (Intr) GropIN GropBF GropIF
## GroupIN
                 -0.779
                 -0.779 0.609
## GroupBF
                 -0.740 0.579 0.579
## GroupIF
## DualTaskReport -0.064 0.000 0.000 0.000
##
## Standardized Within-Group Residuals:
           Min
                          Q1
## -1.889191063 -0.417144413 -0.001957543 0.361793415 2.070980710
```



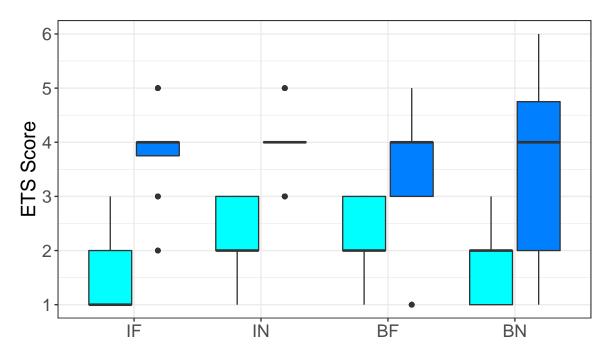
```
## Paired t-test
## For IF, p = 0.8626 > 0.05
## Paired t-test
## For IN, p = 0.1416 > 0.05
## Paired t-test
## For BF, p = 0.9277 > 0.05
## Paired t-test
## For BN, p = 0.7531 > 0.05
```

Linear Modelling for Writing Quality

Our Linear Model:

WritingQuality = 1 + Group + Activity + 1 | Subject

```
## Linear mixed-effects model fit by REML
## Data: full_df
##
         AIC
                  BIC
                         logLik
##
    813.3664 841.2186 -399.6832
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept) Residual
##
## StdDev: 0.7425565 0.5501094
##
## Fixed effects: Score ~ 1 + Group + Activity
                  Value Std.Error DF t-value p-value
## (Intercept) 1.6620758 0.2333235 347 7.12348 0.0000
## GroupIN
          0.4165634 0.3053110 48 1.36439 0.1788
## GroupBF
             0.4114557 0.3216693 48 1.27913 0.2070
## GroupIF
              0.1325876 0.3107867 48 0.42662 0.6716
## ActivityDT 1.8450000 0.0550109 347 33.53878 0.0000
## Correlation:
##
             (Intr) GropIN GropBF GropIF
## GroupIN
             -0.754
## GroupBF
             -0.715 0.547
## GroupIF
             -0.740 0.566 0.537
## ActivityDT -0.118 0.000 0.000 0.000
## Standardized Within-Group Residuals:
          Min
                       Q1
                            Med
                                              QЗ
## -2.68842517 -0.71212271 -0.01163681 0.74268533 2.48327321
## Number of Observations: 400
## Number of Groups: 52
```



Activity 🖨 ST ᄇ DT

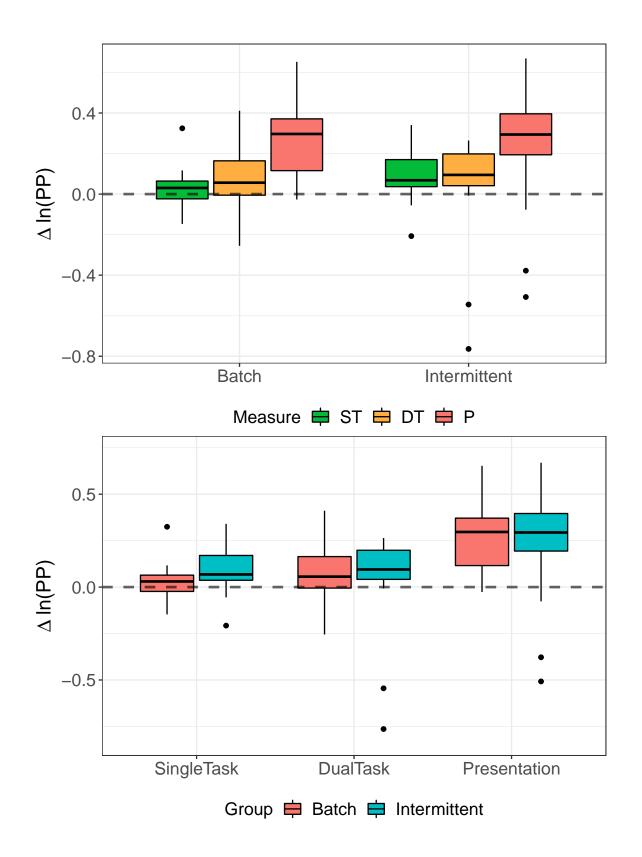
Activity	Group	n
ST	BN	46
ST	IN	59
ST	BF	43
ST	IF	52
DT	BN	46
DT	IN	59
DT	BF	43
DT	IF	52

PP, 2 Groups:

Stress Levels Across Activities

Number of Groups: 48

```
Our Linear Model:
                     \Delta ln(\bar{PP}) = 1 + Group + Activity + 1|Subject
## Linear mixed-effects model fit by REML
## Data: diff_df
##
          AIC
                    BIC
                          logLik
##
    -127.0353 -104.5307 70.51764
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept) Residual
## StdDev: 0.1479979 0.1235555
##
## Fixed effects: PP ~ 1 + Group + Activity
                          Value Std.Error DF t-value p-value
##
## (Intercept)
                    0.03857693 0.03907195 138 0.987330 0.3252
## GroupIntermittent 0.03764870 0.04701821 46 0.800726 0.4274
## ActivityB -0.04418403 0.02522066 138 -1.751898 0.0820
                   0.00053512 0.02522066 138 0.021217 0.9831
## ActivityDT
## ActivityP
                    0.19452518 0.02574922 138 7.554606 0.0000
## Correlation:
                    (Intr) GrpInt ActvtB ActvDT
## GroupIntermittent -0.702
## ActivityB
                    -0.323 0.000
## ActivityDT
                   -0.323 0.000 0.500
## ActivityP
                   -0.317 0.002 0.490 0.490
##
## Standardized Within-Group Residuals:
          Min
                       Q1
                                  Med
## -3.38496348 -0.44645414 -0.07652946 0.42610074 2.40051984
## Number of Observations: 189
```

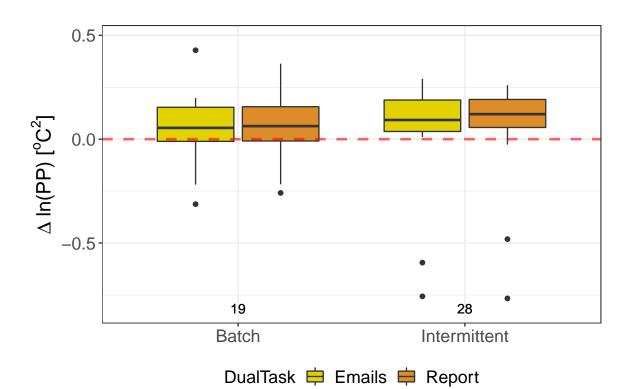


Stress Levels for Dual Task

```
Our Linear Model:
```

```
\Delta ln(\bar{PP}) = 1 + Group + DualTask + 1|Subject
```

```
## Linear mixed-effects model fit by REML
## Data: total_df
##
          AIC
                    BIC
                           logLik
##
     -172.1195 -159.5652 91.05975
##
## Random effects:
## Formula: ~1 | Subject
##
          (Intercept)
                        Residual
              0.20011 0.02539385
## StdDev:
##
## Fixed effects: PP ~ 1 + Group + DualTask
##
                        Value Std.Error DF t-value p-value
## (Intercept)
                    0.0462325 0.04616720 46 1.001415 0.3219
## GroupIntermittent 0.0200485 0.05971774 45 0.335721 0.7386
## DualTaskReport
                    0.0085975 0.00523835 46 1.641261 0.1076
## Correlation:
##
                     (Intr) GrpInt
## GroupIntermittent -0.771
## DualTaskReport
                    -0.057 0.000
##
## Standardized Within-Group Residuals:
                     Q1
                                Med
                                            QЗ
                                                      Max
## -2.2508108 -0.3606567 0.0118096 0.3914856 1.8680528
##
## Number of Observations: 94
## Number of Groups: 47
```



```
## Paired t-test ## For Batch, p = 0.3218 > 0.05
```

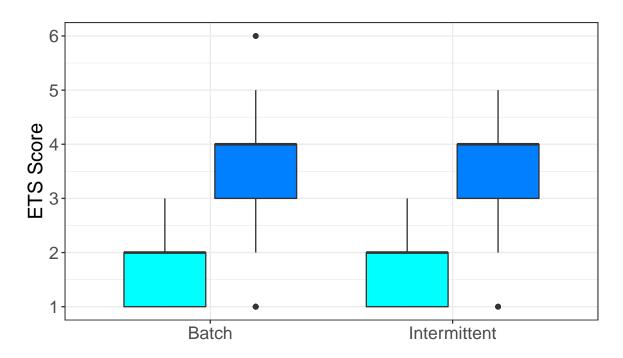
Paired t-test ## For Intermittent, p = 0.217 > 0.05

Linear Modelling for Writing Quality

Our Linear Model:

WritingQuality = 1 + Group + Activity + 1 | Subject

Linear mixed-effects model fit by REML ## Data: full_df ## AIC BIC logLik ## 810.9861 830.9057 -400.493 ## ## Random effects: ## Formula: ~1 | Subject (Intercept) Residual ## ## StdDev: 0.7483934 0.5500858 ## ## Fixed effects: Score ~ 1 + Group + Activity ## Value Std.Error DF t-value p-value 1.9020154 0.15445970 347 12.31399 0.0000 ## (Intercept) ## GroupIntermittent 0.0217373 0.21559651 50 0.10082 0.9201 1.8450000 0.05500858 347 33.54022 0.0000 ## ActivityDT ## Correlation: (Intr) GrpInt ## GroupIntermittent -0.694 ## ActivityDT -0.178 0.000 ## ## Standardized Within-Group Residuals: ## Min Q1 Med QЗ ## -2.70937774 -0.70562726 0.00443306 0.72824283 2.46254300 ## Number of Observations: 400 ## Number of Groups: 52



Activity 🖨 ST 🖨 DT

Activity	Group	n
ST	Batch	105
ST	Intermittent	95
DT	Batch	105
DT	Intermittent	95

HR, 2 Groups:

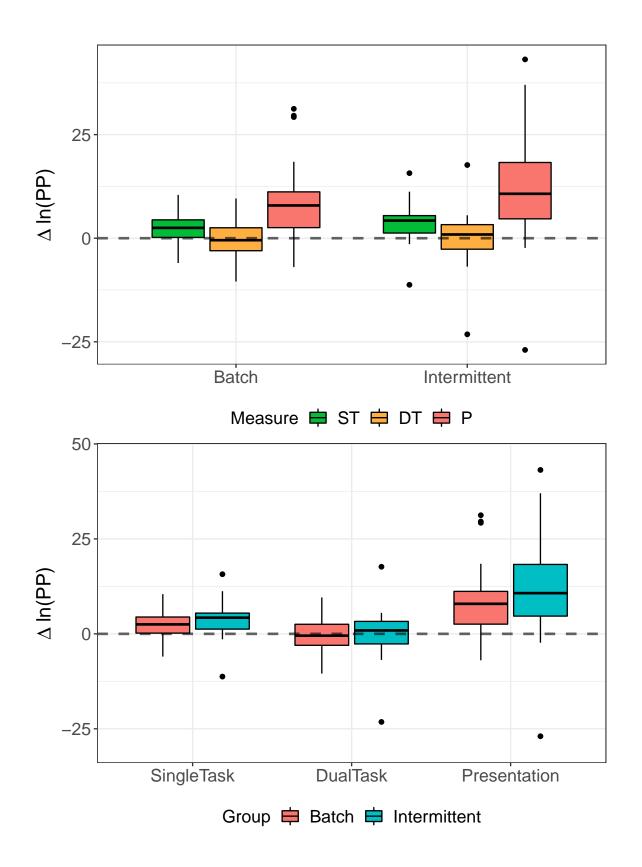
Stress Levels Across Activities

Number of Observations: 189

Number of Groups: 49

Our Linear Model:

```
\Delta \bar{HR} = 1 + Group + Activity + 1|Subject
## Linear mixed-effects model fit by REML
## Data: diff_df
##
         AIC
                  BIC
                         logLik
##
    1263.631 1286.135 -624.8154
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept) Residual
## StdDev: 5.265315 5.688525
##
## Fixed effects: HR ~ 1 + Group + Activity
##
                        Value Std.Error DF
                                            t-value p-value
## (Intercept)
                    2.917119 1.412513 137 2.065198 0.0408
## GroupIntermittent 0.385465 1.718789 47 0.224265 0.8235
## ActivityB -2.462404 1.149255 137 -2.142608 0.0339
                   -3.730290 1.149255 137 -3.245831 0.0015
## ActivityDT
## ActivityP
                    7.236803 1.207183 137 5.994786 0.0000
## Correlation:
                    (Intr) GrpInt ActvtB ActvDT
## GroupIntermittent -0.621
                    -0.407 0.000
## ActivityB
## ActivityDT
                   -0.407 0.000 0.500
## ActivityP
                    -0.390 0.004 0.476 0.476
##
## Standardized Within-Group Residuals:
          Min
                       Q1
                                 Med
## -3.51427366 -0.38364517 -0.02197133 0.34038343 4.48138157
```

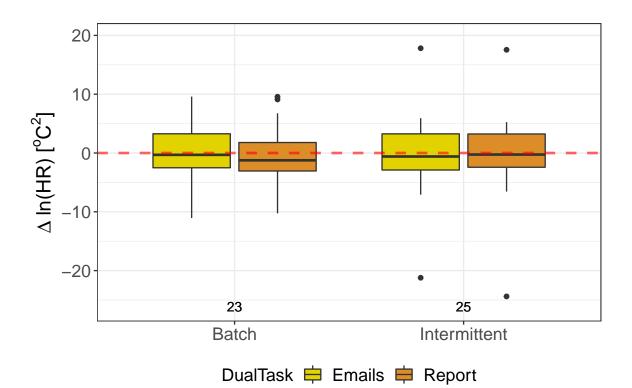


Stress Levels for Dual Task

Number of Observations: 96

Number of Groups: 48

```
Our Linear Model:
                      \Delta \bar{HR} = 1 + Group + DualTask + 1|Subject
## Linear mixed-effects model fit by REML
## Data: total_df
##
          AIC
                   BIC
                          logLik
##
     492.5249 505.1879 -241.2625
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept) Residual
##
             6.016257 1.111417
## StdDev:
##
## Fixed effects: HR ~ 1 + Group + DualTask
##
                          Value Std.Error DF
                                                t-value p-value
## (Intercept)
                    -0.6280509 1.2702091 47 -0.4944468 0.6233
## GroupIntermittent 0.3254378 1.7530211 46 0.1856440 0.8535
## DualTaskReport
                    -0.1808579 0.2268671 47 -0.7971979 0.4293
## Correlation:
##
                     (Intr) GrpInt
## GroupIntermittent -0.719
## DualTaskReport
                    -0.089 0.000
##
## Standardized Within-Group Residuals:
                          Q1
## -2.103401267 -0.397769399 0.007921389 0.384854891 2.328488769
##
```



```
## Paired t-test ## For Batch, p = 0.8989 > 0.05
```

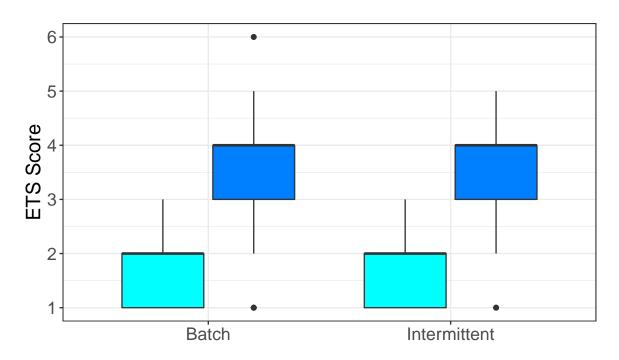
Paired t-test ## For Intermittent, p = 0.2465 > 0.05

Linear Modelling for Writing Quality

Our Linear Model:

WritingQuality = 1 + Group + Activity + 1 | Subject

Linear mixed-effects model fit by REML ## Data: full_df ## AIC BIC logLik ## 810.9861 830.9057 -400.493 ## ## Random effects: ## Formula: ~1 | Subject (Intercept) Residual ## ## StdDev: 0.7483934 0.5500858 ## ## Fixed effects: Score ~ 1 + Group + Activity ## Value Std.Error DF t-value p-value 1.9020154 0.15445970 347 12.31399 0.0000 ## (Intercept) ## GroupIntermittent 0.0217373 0.21559651 50 0.10082 0.9201 1.8450000 0.05500858 347 33.54022 0.0000 ## ActivityDT ## Correlation: (Intr) GrpInt ## GroupIntermittent -0.694 ## ActivityDT -0.178 0.000 ## ## Standardized Within-Group Residuals: ## Min Q1 Med QЗ ## -2.70937774 -0.70562726 0.00443306 0.72824283 2.46254300 ## Number of Observations: 400 ## Number of Groups: 52



Activity 🖨 ST 🖨 DT

Activity	Group	n
ST	Batch	105
ST	Intermittent	95
DT	Batch	105
DT	Intermittent	95

Let's Get to 10 * with Four Groups

Our Linear Model:

```
\Delta ln(PP) = 1 + ETSScore + Group + Activity + 1|Subject
```

```
## Linear mixed-effects model fit by REML
## Data: full_df
##
          AIC
                    BIC
                          logLik
##
    -43.31829 -24.26207 29.65914
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept) Residual
##
## StdDev: 0.1306732 0.1054537
##
## Fixed effects: PP ~ 1 + ETSScore + Group + Activity
                                         t-value p-value
                    Value Std.Error DF
## (Intercept) 0.01360670 0.05749257 41 0.2366689 0.8141
## ETSScore -0.00963787 0.01744712 41 -0.5524046 0.5837
## GroupIN
               0.07927376 0.06357729 39 1.2468881 0.2199
## GroupBF
               0.02644267 0.07423145 39
                                       0.3562192 0.7236
## GroupIF
               0.08555631 0.06328765 39
                                       1.3518641 0.1842
## ActivityDT 0.01320544 0.03930256 41 0.3359944 0.7386
## Correlation:
##
             (Intr) ETSScr GropIN GropBF GropIF
## ETSScore
            -0.525
## GroupIN
             -0.569 -0.096
## GroupBF
             -0.505 -0.049 0.484
## GroupIF
             -0.616 -0.012 0.564 0.482
## ActivityDT 0.314 -0.816 0.078 0.040 0.010
## Standardized Within-Group Residuals:
                       01
          Min
                                 Med
                                              QЗ
                                                         Max
## -3.94012040 -0.20514020 0.02007854 0.25084072 1.58902901
##
## Number of Observations: 86
## Number of Groups: 43
```

Hey! Let's ANOVA!

Our ANOVA Model:

```
\Delta ln(\bar{PP}) = 1 + StressFactor + IntermittentFactor
```

```
##
                      Df Sum Sq Mean Sq F value Pr(>F)
                      1 0.0537 0.05365
                                          1.325 0.256
## StressFactor
## IntermittentFactor 1 0.0050 0.00503
                                          0.124 0.726
## Residuals
                     45 1.8227 0.04050
##
    Tukey multiple comparisons of means
##
       95% family-wise confidence level
## Fit: aov(formula = PP ~ 1 + StressFactor + IntermittentFactor, data = diff_df, na.action = na.om
##
## $StressFactor
##
                                                 p adj
                  diff
                               lwr
                                         upr
## High-Low 0.06692245 -0.05019477 0.1840397 0.2558574
## $IntermittentFactor
                                       diff
                                                                     p adj
                                                    lwr
## Intermittent-Non-Intermittent 0.02074362 -0.09793177 0.139419 0.7264433
```

Now a Linear Model Very Close to the ANOVA One Above:

Our Linear Model:

```
\Delta ln(PP) = 1 + StressIndicator + IntermittencyIndicator + 1|Subjects
```

```
## Linear mixed-effects model fit by REML
## Data: diff_df
         AIC
                 BIC logLik
##
    2.229069 11.26238 3.885466
##
## Random effects:
## Formula: ~1 | Subject
          (Intercept) Residual
##
## StdDev: 0.1884434 0.07066626
## Fixed effects: PP ~ 1 + StressFactor + IntermittentFactor
##
                                     Value Std.Error DF t-value p-value
                               0.01447910 0.05358728 45 0.2701965 0.7882
## (Intercept)
## StressFactorHigh
                                0.06620004 0.05818471 45 1.1377565 0.2612
## IntermittentFactorIntermittent 0.02076942 0.05895882 45 0.3522700 0.7263
## Correlation:
                                 (Intr) StrsFH
## StressFactorHigh
                                 -0.543
## IntermittentFactorIntermittent -0.622 -0.035
## Standardized Within-Group Residuals:
                       Q1
                                 Med
                                              QЗ
## -1.39425172 -0.11483069 0.06050482 0.21631435 0.57647112
## Number of Observations: 48
## Number of Groups: 48
```

Hey! Let's ANOVA 2: With Interaction Effects

Our ANOVA Model:

 $\Delta ln(PP) = 1 + StressFactor + IntermittentFactor + StressFactor * IntermittentFactor$

```
##
                                   Df Sum Sq Mean Sq F value Pr(>F)
## StressFactor
                                    1 0.0537 0.05365
                                                       1.297 0.261
## IntermittentFactor
                                    1 0.0050 0.00503
                                                       0.122 0.729
## StressFactor:IntermittentFactor 1 0.0025 0.00246
                                                       0.060 0.808
## Residuals
                                   44 1.8202 0.04137
##
    Tukey multiple comparisons of means
##
       95% family-wise confidence level
##
## Fit: aov(formula = PP ~ 1 + StressFactor * IntermittentFactor, data = diff_df, na.action = na.om
##
## $StressFactor
##
                  diff
                              lwr
                                        upr
## High-Low 0.06692245 -0.0515124 0.1853573 0.2609499
## $IntermittentFactor
                                       diff
                                                    lwr
                                                              upr
                                                                      p adj
## Intermittent-Non-Intermittent 0.02074362 -0.09926692 0.1407542 0.7292364
##
## $`StressFactor:IntermittentFactor`
##
                                                      diff
                                                                   lwr
## High:Non-Intermittent-Low:Non-Intermittent 0.049265182 -0.1936003
## Low:Intermittent-Low:Non-Intermittent
                                               0.005788591 -0.2226361
## High:Intermittent-Low:Non-Intermittent
                                               0.084146984 -0.1375578
                                              -0.043476591 -0.2719012
## Low:Intermittent-High:Non-Intermittent
## High:Intermittent-High:Non-Intermittent
                                               0.034881802 -0.1868230
## High:Intermittent-Low:Intermittent
                                               0.078358393 -0.1274260
##
                                                    upr
                                                            p adj
## High:Non-Intermittent-Low:Non-Intermittent 0.2921306 0.9483086
## Low:Intermittent-Low:Non-Intermittent
                                              0.2342132 0.9998871
## High:Intermittent-Low:Non-Intermittent
                                              0.3058518 0.7425043
## Low:Intermittent-High:Non-Intermittent
                                              0.1849481 0.9567128
                                              0.2565866 0.9747539
## High:Intermittent-High:Non-Intermittent
## High:Intermittent-Low:Intermittent
                                              0.2841428 0.7406074
```