

# Comparing the groups

## Contents

<b>Compare the <i>Curiosity</i> groups</b>	<b>1</b>
Include the item order . . . . .	1
<b>Compare the <i>Interest</i> groups</b>	<b>2</b>
Include the item order . . . . .	2
<b>Compare the <i>Surprise</i> groups</b>	<b>2</b>
Include the item order . . . . .	3
<b>Compare the <i>Pre-Interest</i> groups</b>	<b>3</b>
Include the item order . . . . .	3
<b>Compare the <i>Pre-Surprise</i> groups</b>	<b>4</b>
Include the item order . . . . .	4
<b>Check any overlap between <i>Surprise</i> groups and <i>Pre-surprise</i> groups</b>	<b>4</b>

## Compare the *Curiosity* groups

```
##      CurGrpMd      Mean        SD
## 1:     High 0.2510022 0.1523117
## 2:     Low 0.2598545 0.1557280
```

### Statistic difference

```
##
##  Paired t-test
##
## data: SAcc by CurGrpMd
## t = -0.38627, df = 25, p-value = 0.7026
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.05605085 0.03834634
## sample estimates:
## mean of the differences
## -0.008852259
```

### Include the item order

```
##      CurGrpMd ObjOrdGrp      Mean        SD
## 1:     High     Early 0.2526353 0.1734485
## 2:     High    Later 0.2493691 0.1784150
## 3:     Low     Early 0.2697751 0.1596873
## 4:     Low    Later 0.2499339 0.1782904
```

### Statistic difference

```

## $ANOVA
##          Effect DFn DFd      F      p p<.05      ges
## 2       CurGrpMd   1  25 0.1492072 0.7025621 0.0006832108
## 3       ObjOrdGrp   1  25 0.3283328 0.5717608 0.0011632734
## 4 CurGrpMd:ObjOrdGrp   1  25 0.1300348 0.7214250 0.0005988734

```

## Compare the *Interest* groups

```

##    IntGrpMd      Mean      SD
## 1:    High 0.2665090 0.1528836
## 2:    Low 0.2429055 0.1588604

```

### Statistic difference

```

##
## Paired t-test
##
## data: SAcc by IntGrpMd
## t = 1.1732, df = 25, p-value = 0.2518
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.01783330 0.06504026
## sample estimates:
## mean of the differences
##                      0.02360348

```

## Include the item order

```

##    IntGrpMd ObjOrdGrp      Mean      SD
## 1:    High     Early 0.2517043 0.1858271
## 2:    High    Later 0.2813136 0.1595931
## 3:    Low     Early 0.2474308 0.1545631
## 4:    Low    Later 0.2383801 0.1898317

```

### Statistic difference

```

## $ANOVA
##          Effect DFn DFd      F      p p<.05      ges
## 2       IntGrpMd   1  25 1.3763215 0.2517856 0.0048081003
## 3       ObjOrdGrp   1  25 0.2428947 0.6264242 0.0009154703
## 4 IntGrpMd:ObjOrdGrp   1  25 0.8524136 0.3646961 0.0032297751

```

## Compare the *Surprise* groups

```

##    SurGrpMd      Mean      SD
## 1:    High 0.3020019 0.1723657
## 2:    Low 0.2178292 0.1529677

```

### Statistic difference

```

##
## Paired t-test
##
## data: SAcc by SurGrpMd
## t = 3.1552, df = 25, p-value = 0.004146
## alternative hypothesis: true difference in means is not equal to 0

```

```

## 95 percent confidence interval:
## 0.02923024 0.13911530
## sample estimates:
## mean of the differences
## 0.08417277

```

### Include the item order

```

##   SurGrpMd ObjOrdGrp      Mean       SD
## 1:    High    Early 0.2966524 0.1892961
## 2:    High   Later 0.3073514 0.1756607
## 3:    Low    Early 0.2222629 0.1617775
## 4:    Low   Later 0.2133954 0.1868869

```

### Statistic difference

```

## $ANOVA
##          Effect DFn DFD      F      p p<.05      ges
## 2        SurGrpMd   1  25 9.955563003 0.004145808 * 5.451784e-02
## 3        ObjOrdGrp   1  25 0.001765054 0.966822441  6.824860e-06
## 4 SurGrpMd:ObjOrdGrp   1  25 0.269984232 0.607912712  7.783450e-04

```

### Compare the *Pre-Interest* groups

```

##   PreIntGrpMd      Mean       SD
## 1:    High 0.2458435 0.1396809
## 2:    Low  0.2541311 0.1688553

```

### Statistic difference

```

##
## Paired t-test
##
## data: SAcc by PreIntGrpMd
## t = -0.41178, df = 25, p-value = 0.684
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
## -0.04973845 0.03316336
## sample estimates:
## mean of the differences
## -0.008287546

```

### Include the item order

```

##   PreIntGrpMd ObjOrdGrp      Mean       SD
## 1:    High    Early 0.2357550 0.1571281
## 2:    High   Later 0.2559320 0.1641849
## 3:    Low    Early 0.2473850 0.1876699
## 4:    Low   Later 0.2608771 0.1648013

```

### Statistic difference

```

## $ANOVA
##          Effect DFn DFD      F      p p<.05      ges
## 2        PreIntGrpMd   1  25 0.16956009 0.6840123  0.0006260537
## 3        ObjOrdGrp   1  25 0.75283941 0.3938313  0.0025781835
## 4 PreIntGrpMd:ObjOrdGrp   1  25 0.03545828 0.8521588  0.0001018891

```

## Compare the *Pre-Surprise* groups

```
##      PreSurGrpMd      Mean        SD
## 1:          High 0.2837249 0.1541879
## 2:          Low 0.2178360 0.1643459

Statistic difference

## 
##  Paired t-test
##
## data: SAcc by PreSurGrpMd
## t = 2.248, df = 24, p-value = 0.03403
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.005396606 0.126381172
## sample estimates:
## mean of the differences
##                         0.06588889
```

## Include the item order

```
##      PreSurGrpMd Obj0rdGrp      Mean        SD
## 1:          High    Early 0.2759153 0.1480133
## 2:          High   Later 0.2915344 0.1910806
## 3:          Low    Early 0.2208360 0.1760099
## 4:          Low   Later 0.2148360 0.1692047
```

## Statistic difference

```
## $ANOVA
##              Effect DFn DFd       F      p p<.05      ges
## 2          PreSurGrpMd   1 24 5.0536029 0.03403155      * 0.0369006339
## 3          Obj0rdGrp   1 24 0.0524164 0.82085039      0.0002041051
## 4 PreSurGrpMd:Obj0rdGrp   1 24 0.5379768 0.47037706      0.0010301581
```

## Check any overlap between *Surprise* groups and *Pre-surprise* groups

```
##      SubjectNo NOverlappingRooms
## 1:          P04                  4
## 2:          P05                  2
## 3:          P06                  2
## 4:          P07                  7
## 5:          P08                  6
## 6:          P09                  3
## 7:          P10                  5
## 8:          P11                  2
## 9:          P12                  8
## 10:         P13                  4
## 11:         P14                  9
## 12:         P15                  5
## 13:         P16                  2
## 14:         P17                  2
## 15:         P18                  3
## 16:         P19                  2
## 17:         P20                  6
```

```

## 18:      P21      3
## 19:      P22      9
## 20:      P23      5
## 21:      P24      5
## 22:      P25      3
## 23:      P26      6
## 24:      P27      8
## 25:      P28      6
## 26:      P29      2
## 27:      P30      2
## 28:      P31      3
## 29:      P32      4
## SubjectNo NOverlappingRooms

```

