

# Tests of independence between intervention factors and intervention effectiveness

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## 1 RCT vs Other study designs

```
##           Ineffective Effective
## RCT           12          39
## Not RCT        6          15

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.7661
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.2169136 2.9804290
## sample estimates:
## odds ratio
##  0.7721465
```

## 2 Primary vs Secondary stress outcome metric

```
##           Ineffective Effective
## Primary           11          36
## Secondary          7          18

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.7767
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.2308185 2.8311040
## sample estimates:
## odds ratio
##  0.7884174
```

## 3 Control type

```
##                                     Ineffective Effective
## Active / non-active controls, or both           18          46
## No control                                     0           8

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.1879
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.5920518      Inf
## sample estimates:
## odds ratio
##           Inf
```

## 4 Choice of statistic test

We opted for Fisher's exact test (two-sided) due to relatively small sample sizes, with some contingency tables for the parameters in question not meeting conditions for Chi-square test, as the frequency values in some cells were below 5 and their expected value less than 1.

## 5 Population category

	Ineffective	Effective
## Youth	0	4
## Healthy adults	4	17
## High-anxiety	0	4
## Clinical (chronic)	4	7
## Clinical (acute)	4	17
## Simulated-stress	6	5

```
##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.1408
## alternative hypothesis: two.sided
```

## 6 Breathwork pace

	Ineffective	Effective
## Slow only	13	36
## Fast only	2	0
## Both	0	12
## Regular	1	1
## ANB	2	5

```
##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.01444
## alternative hypothesis: two.sided
```

Testing only breathwork pace categories other than fast-only:

	Ineffective	Effective
## Slow only	13	36
## Both	0	12
## Regular	1	1
## ANB	2	5

```
##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.09797
## alternative hypothesis: two.sided
```

Comparing fast-only vs. any other breath pace:

```

##               Ineffective Effective
## Any other pace          16       54
## Fast-only pace          2        0

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.05986
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.000000 1.730438
## sample estimates:
## odds ratio
##          0

```

## 7 Number of sessions and intervention or study duration

### 7.1 Multiple vs. Single Session interventions

```

##               Ineffective Effective
## Multiple          5        44
## Single           13        10

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 5.706e-05
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.02038333 0.34741648
## sample estimates:
## odds ratio
## 0.09149436

```

### 7.2 Long-term vs. No long-term practice

Long-term practice was defined as 6 sessions over 1 week and continuing throughout the outcome measurement period.

```

##               Ineffective Effective
## Long-term          2        27
## Short-term         16        27

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.00474
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.01309064 0.62914149
## sample estimates:
## odds ratio
## 0.1281745

```

### 7.3 Intervention duration (in days)

```
##           Ineffective Effective
## 1 day           16           21
## 2-5 days         0            6
## 6-30 days        0           12
## 31+ days         1           15

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.000818
## alternative hypothesis: two.sided
```

### 7.4 Intervention duration (in minutes)

```
##           Ineffective Effective
## <5min           5            3
## 5-10min         3           16
## >10min          6           27

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.02891
## alternative hypothesis: two.sided

##           Ineffective Effective
## <5min           5            3
## >=5min          9           43

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.01316
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  1.229066 58.084203
## sample estimates:
## odds ratio
##  7.586322

##           Ineffective Effective
## 5-10             3           16
## 11-20            3           10
## >20min           3           17

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.8068
## alternative hypothesis: two.sided
```

## 8 Training guidance (human vs. no human guiding)

```
##               Ineffective Effective
## Human-guided training           6      50
## No human-guided training        12       4

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 1.479e-06
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.007479809 0.195061994
## sample estimates:
## odds ratio
## 0.04319892
```

## 9 Number of Human-guided sessions

```
##           Ineffective Effective
## 0              12       4
## 1 only          2      22
## 2-3             3       4
## 4+              0      24

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 1.728e-08
## alternative hypothesis: two.sided
```

## 10 Individual vs. Group

```
##           Ineffective Effective
## Group              6      15
## Individual         10      33

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.7604
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.328497 4.923933
## sample estimates:
## odds ratio
##  1.314103
```

## 11 Individual vs. Group vs Combined

```
##           Ineffective Effective
```

```
## Group          6      15
## Individual     10     33
## BOTH           0      3

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.7917
## alternative hypothesis: two.sided
```

## 12 Homework practice

```
##      Ineffective Effective
## No          15      35
## Yes         3      19

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.2365
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.6387678 16.2486213
## sample estimates:
## odds ratio
##  2.680518
```

## 13 ANB vs other breathworks types

```
##      Ineffective Effective
## ANB          2      7
## Other        16     49

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 1
## alternative hypothesis: true odds ratio is not equal to 1
## 95 percent confidence interval:
##  0.08097669 5.27442393
## sample estimates:
## odds ratio
##  0.8765427
```

## 14 Number of outcome measurements

```
##      Ineffective Effective
## 1          1      2
## 2         12     29
## 3+         5     23
```

```
##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 0.4342
## alternative hypothesis: two.sided
```

## 15 Number of Framework criteria

```
##           Ineffective Effective
## None           11           1
## A only          2           9
## B only          1           3
## A, B            2          14
## A, B, C         2          27

##
## Fisher's Exact Test for Count Data
##
## data:  dat
## p-value = 4.368e-07
## alternative hypothesis: two.sided
```