# X-META Dynamic Report

## 1 Introduction

### 1.1 What is X-meta?

**X-meta is an open-sourced, well-documented and interactive toolbox for meta-analysis.There are three main components to this toolbox: An R package called "xmeta", video tutorials and documentation for the package and an online analysis platform.**

**Xmeta package offers several functions for performing meta-analysis and visualizing outcomes, allowing users to conduct robust multivariate meta-analysis (mmeta), publication bias test (PB), outcome reporting bias test (ORB) and novel visualization tool (galaxy). Through the tutorials, reference documents and sample code, users can have a comprehensive exploration of the features found in XMETA and how they may apply to analytical work. The online meta-analysis system works with different available methods and a variety of formats of data, enabling users to quickly obtain the meta-analysis results without writing any code.**

**Please check https://www.xmeta.wiki/ to explore more features.**

### 1.2 About the method and dataset

**According to the uploaded dataset, this is a report for *Univariate Meta-analysis* with *Continuous Outcomes*.**

### 1.3 In this meta-analysis report, you can get:

1. **Your uploaded data**
2. **Summary**
3. **Forest Plot**
4. **Sensitivity Analysis (Fixed & Random Effect Model)**
5. **Funnel plot for Publication bias test**

# 2 Dataset & Analysis

## 2.1 Here is the dataset you uploaded:

There are overall 17 studies in the dataset.

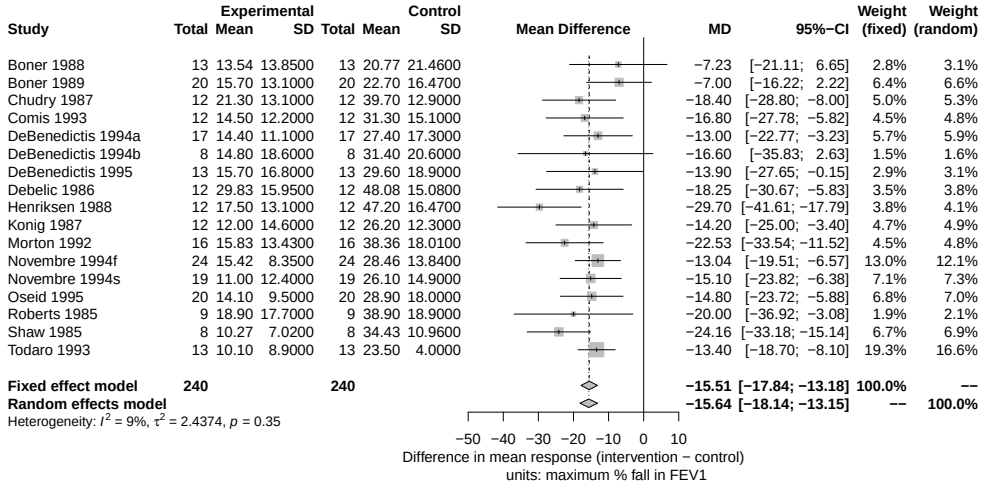
```
##          author  year Ne    Me    Se Nc    Mc    Sc    duration
## 1         Boner  1988 13 13.54 13.85 13 20.77 21.46 <= 3 months
## 2         Boner  1989 20 15.70 13.10 20 22.70 16.47 <= 3 months
## 3        Chudry  1987 12 21.30 13.10 12 39.70 12.90 <= 3 months
## 4         Comis  1993 12 14.50 12.20 12 31.30 15.10 <= 3 months
## 5  DeBenedictis 1994a 17 14.40 11.10 17 27.40 17.30 <= 3 months
## 6  DeBenedictis 1994b  8 14.80 18.60  8 31.40 20.60  > 3 months
## 7  DeBenedictis  1995 13 15.70 16.80 13 29.60 18.90  > 3 months
## 8       Debelic  1986 12 29.83 15.95 12 48.08 15.08  > 3 months
## 9     Henriksen  1988 12 17.50 13.10 12 47.20 16.47  > 3 months
## 10        Konig  1987 12 12.00 14.60 12 26.20 12.30  > 3 months
## 11       Morton  1992 16 15.83 13.43 16 38.36 18.01  > 3 months
## 12     Novembre 1994f 24 15.42  8.35 24 28.46 13.84  > 3 months
## 13     Novembre 1994s 19 11.00 12.40 19 26.10 14.90  > 3 months
## 14        Oseid  1995 20 14.10  9.50 20 28.90 18.00  > 3 months
## 15      Roberts  1985  9 18.90 17.70  9 38.90 18.90  > 3 months
## 16         Shaw  1985  8 10.27  7.02  8 34.43 10.96  > 3 months
## 17       Todaro  1993 13 10.10  8.90 13 23.50  4.00  > 3 months
```

## 2.2 Summary:

```
##                          MD               95%-CI %W(fixed) %W(random)
## Boner 1988          -7.2300 [-21.1141;   6.6541]       2.8        3.1
## Boner 1989          -7.0000 [-16.2230;   2.2230]       6.4        6.6
## Chudry 1987        -18.4000 [-28.8023;  -7.9977]       5.0        5.3
## Comis 1993         -16.8000 [-27.7835;  -5.8165]       4.5        4.8
## DeBenedictis 1994a -13.0000 [-22.7710;  -3.2290]       5.7        5.9
## DeBenedictis 1994b -16.6000 [-35.8326;   2.6326]       1.5        1.6
## DeBenedictis 1995  -13.9000 [-27.6461;  -0.1539]       2.9        3.1
## Debelic 1986       -18.2500 [-30.6692;  -5.8308]       3.5        3.8
## Henriksen 1988     -29.7000 [-41.6068; -17.7932]       3.8        4.1
## Konig 1987         -14.2000 [-25.0013;  -3.3987]       4.7        4.9
## Morton 1992        -22.5300 [-33.5382; -11.5218]       4.5        4.8
## Novembre 1994f     -13.0400 [-19.5067;  -6.5733]      13.0       12.1
## Novembre 1994s     -15.1000 [-23.8163;  -6.3837]       7.1        7.3
## Oseid 1995         -14.8000 [-23.7200;  -5.8800]       6.8        7.0
## Roberts 1985       -20.0000 [-36.9171;  -3.0829]       1.9        2.1
## Shaw 1985          -24.1600 [-33.1791; -15.1409]       6.7        6.9
## Todaro 1993        -13.4000 [-18.7042;  -8.0958]      19.3       16.6
##
## Number of studies combined: k = 17
```

```
##
##                              MD               95%-CI      z  p-value
## Fixed effect model   -15.5140 [-17.8435; -13.1845] -13.05 < 0.0001
## Random effects model -15.6436 [-18.1369; -13.1502] -12.30 < 0.0001
##
## Quantifying heterogeneity:
## tau^2 = 2.4374; H = 1.05 [1.00; 1.35]; I^2 = 8.9% [0.0%; 45.3%]
##
## Test of heterogeneity:
##      Q d.f. p-value
##  17.57   16  0.3496
##
## Details on meta-analytical method:
## - Inverse variance method
## - DerSimonian-Laird estimator for tau^2
```

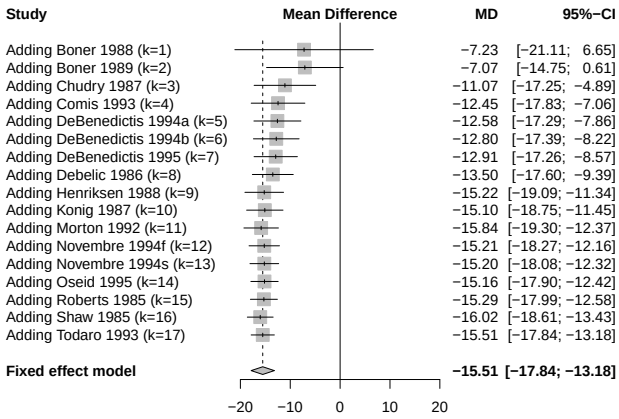
## 2.3 Forest plot:

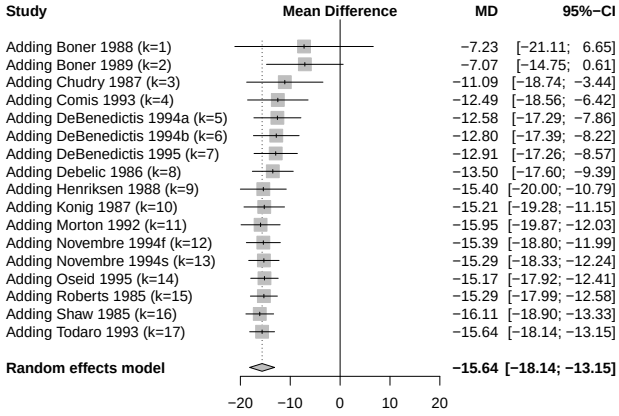
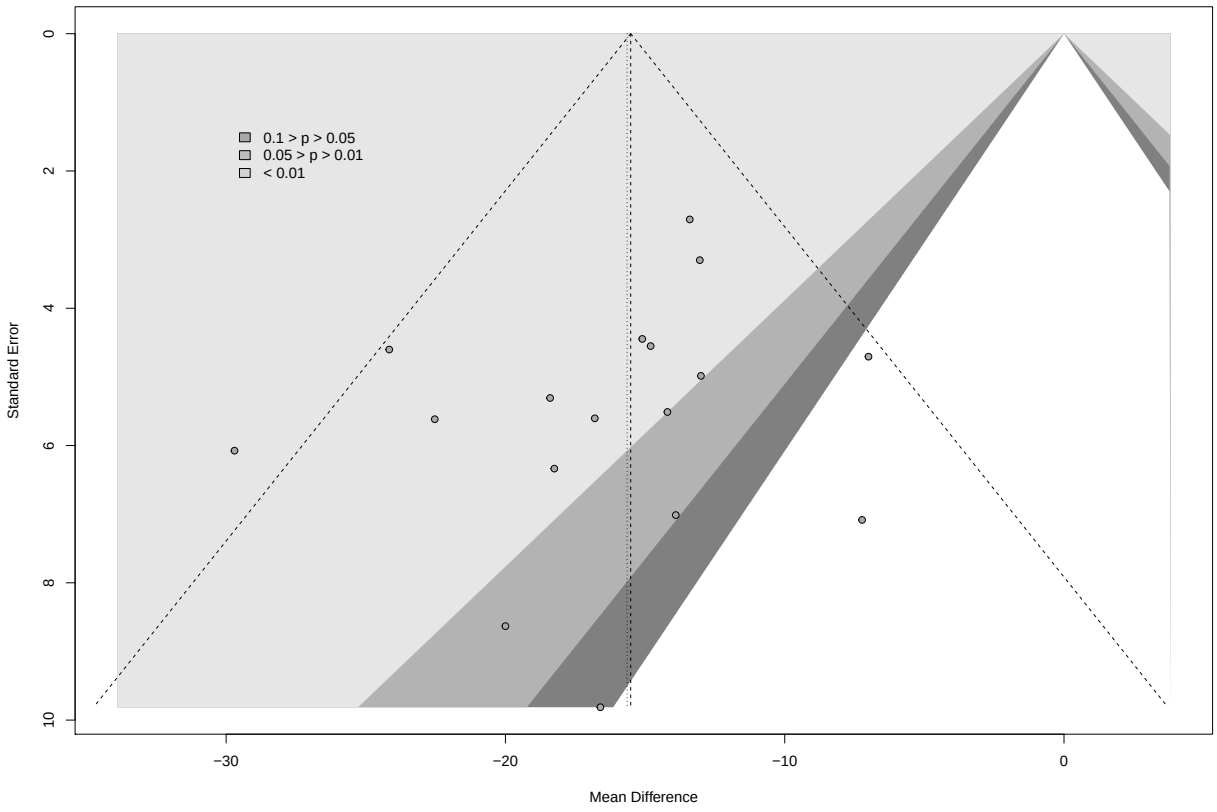



## 2.4 Heterogeneity test statistics (you can also get these results from Summary):

The value of $tau^2$ is 2.4373623; the value of $I^2$ is 8.94%.

## 2.5 Sensitivity test:






## 2.6 Publication bias test: