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Packages and Datasets

```
### Load "Read Excel Files" package
library(readxl)

### Load "Package for Analysis of Space-Time Ecological Series" package
library(pastecs)

### Load "Procedures for Psychological, Psychometric, and Personality
Research" package
library(psych)

### Load "Various R Programming Tools for Model Fitting" package
library(gmodels)

### Load "Support Functions and Datasets for Venables and Ripley's MASS"
package
```

```
library(MASS)

### Load "Functions that Apply to Rows and Columns of Matrices (and to
Vectors)" package
library(matrixStats)

### Load "Meta-Analysis Package for R"
library(metafor)

### Load "General Package for Meta-Analysis"
library(meta)

### Upload data from Excel file
dboth <- read_excel("5. Grant - Veteran Video Game Behavioral Health
Revision - Multimedia Appendix 5.xlsx")

#### Create Study 1 and Study 2 Datasets
ds1 <- subset(dboth, study == "1", select = age:vgdaysweek)
ds2 <- subset(dboth, study == "2", select = age:vgdaysweek)

#### Create Positive Screen Datasets
anyscreen_yes_ds1 <- subset(ds1, anyscreen == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
anyscreen_no_ds1 <- subset(ds1, anyscreen == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
anyscreen_yes_ds2 <- subset(ds2, anyscreen == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
anyscreen_no_ds2 <- subset(ds2, anyscreen == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
anymhscreen_yes_ds1 <- subset(ds1, anymhscreen == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anymhscreen_no_ds1 <- subset(ds1, anymhscreen == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
anymhscreen_yes_ds2 <- subset(ds2, anymhscreen == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anymhscreen_no_ds2 <- subset(ds2, anymhscreen == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
ptsd_yes_ds1 <- subset(ds1, ptsd == "1", select = c(vghrsday, vghrsweek,
vgdaysweek))
ptsd_no_ds1 <- subset(ds1, ptsd == "0", select = c(vghrsday, vghrsweek,
vgdaysweek))
ptsd_yes_ds2 <- subset(ds2, ptsd == "1", select = c(vghrsday, vghrsweek,
vgdaysweek))
ptsd_no_ds2 <- subset(ds2, ptsd == "0", select = c(vghrsday, vghrsweek,
vgdaysweek))
depression_yes_ds1 <- subset(ds1, depression == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
depression_no_ds1 <- subset(ds1, depression == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
depression_yes_ds2 <- subset(ds2, depression == "1", select = c(vghrsday,
```

```
vghrsweek, vgdaysweek))
depression_no_ds2 <- subset(ds2, depression == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
anysudscreen_yes_ds1 <- subset(ds1, anysudscreen == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anysudscreen_no_ds1 <- subset(ds1, anysudscreen == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
anysudscreen_yes_ds2 <- subset(ds2, anysudscreen == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anysudscreen_no_ds2 <- subset(ds2, anysudscreen == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
audit_yes_ds1 <- subset(ds1, audit == "1", select = c(vghrsday, vghrsweek,
vgdaysweek))
audit_no_ds1 <- subset(ds1, audit == "0", select = c(vghrsday, vghrsweek,
vgdaysweek))
audit_yes_ds2 <- subset(ds2, audit == "1", select = c(vghrsday, vghrsweek,
vgdaysweek))
audit_no_ds2 <- subset(ds2, audit == "0", select = c(vghrsday, vghrsweek,
vgdaysweek))
canscreen_yes_ds1 <- subset(ds1, canscreen == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
canscreen_no_ds1 <- subset(ds1, canscreen == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
canscreen_yes_ds2 <- subset(ds2, canscreen == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
canscreen_no_ds2 <- subset(ds2, canscreen == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))

#### Create Study 1 Care Receipt Datasets
ds1anyscreen <- subset(ds1, anyscreen == "1", select = age:vgdaysweek)
anycaredis_yes_ds1 <- subset(ds1anyscreen, anydis == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycaredis_no_ds1 <- subset(ds1anyscreen, anydis == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycareyear_yes_ds1 <- subset(ds1anyscreen, anyyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycareyear_no_ds1 <- subset(ds1anyscreen, anyyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycaremonth_yes_ds1 <- subset(ds1anyscreen, anymonth == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycaremonth_no_ds1 <- subset(ds1anyscreen, anymonth == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
ds1anymhscreen <- subset(ds1, anymhscreen == "1", select =
age:vgdaysweek)
mhdis_yes_ds1 <- subset(ds1anymhscreen, mhdis == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhdis_no_ds1 <- subset(ds1anymhscreen, mhdis == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhyear_yes_ds1 <- subset(ds1anymhscreen, mhyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
```

```
mhyear_no_ds1 <- subset(ds1anymhscreen, mhyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhmonth_yes_ds1 <- subset(ds1anymhscreen, mhmonth == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhmonth_no_ds1 <- subset(ds1anymhscreen, mhmonth == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
ds1ptsd <- subset(ds1, ptsd == "1", select = age:vgdaysweek)
ptsddis_yes_ds1 <- subset(ds1ptsd, mhdis == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
ptsddis_no_ds1 <- subset(ds1ptsd, mhdis == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
ptsdyear_yes_ds1 <- subset(ds1ptsd, mhyear == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
ptsdyear_no_ds1 <- subset(ds1ptsd, mhyear == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
ptsdmonth_yes_ds1 <- subset(ds1ptsd, mhmonth == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
ptsdmonth_no_ds1 <- subset(ds1ptsd, mhmonth == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
ds1depression <- subset(ds1, depression == "1", select = age:vgdaysweek)
depressiondis_yes_ds1 <- subset(ds1depression, mhdis == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
depressiondis_no_ds1 <- subset(ds1depression, mhdis == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
depressionyear_yes_ds1 <- subset(ds1depression, mhyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
depressionyear_no_ds1 <- subset(ds1depression, mhyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
depressionmonth_yes_ds1 <- subset(ds1depression, mhmonth == "1", select
= c(vghrsday, vghrsweek, vgdaysweek))
depressionmonth_no_ds1 <- subset(ds1depression, mhmonth == "0", select
= c(vghrsday, vghrsweek, vgdaysweek))
ds1anysudscreen <- subset(ds1, anysudscreen == "1", select =
age:vgdaysweek)
anysudscreendis_yes_ds1 <- subset(ds1anysudscreen, alcsuddis == "1",
select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreendis_no_ds1 <- subset(ds1anysudscreen, alcsuddis == "0",
select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreenyear_yes_ds1 <- subset(ds1anysudscreen, alcsudyear == "1",
select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreenyear_no_ds1 <- subset(ds1anysudscreen, alcsudyear == "0",
select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreenmonth_yes_ds1 <- subset(ds1anysudscreen, alcsudmonth ==
"1", select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreenmonth_no_ds1 <- subset(ds1anysudscreen, alcsudmonth ==
"0", select = c(vghrsday, vghrsweek, vgdaysweek))
ds1audit <- subset(ds1, audit == "1", select = age:vgdaysweek)
auditdis_yes_ds1 <- subset(ds1audit, alcsuddis == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
auditdis_no_ds1 <- subset(ds1audit, alcsuddis == "0", select = c(vghrsday,
```

```
vghrsweek, vgdaysweek))
audityear_yes_ds1 <- subset(ds1audit, alcsudyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
audityear_no_ds1 <- subset(ds1audit, alcsudyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
auditmonth_yes_ds1 <- subset(ds1audit, alcsudmonth == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
auditmonth_no_ds1 <- subset(ds1audit, alcsudmonth == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
ds1canscreen <- subset(ds1, canscreen == "1", select = age:vgdaysweek)
cannabisdis_yes_ds1 <- subset(ds1canscreen, alcsuddis == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
cannabisdis_no_ds1 <- subset(ds1canscreen, alcsuddis == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
cannabisyear_yes_ds1 <- subset(ds1canscreen, alcsudyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
cannabisyear_no_ds1 <- subset(ds1canscreen, alcsudyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
cannabismonth_yes_ds1 <- subset(ds1canscreen, alcsudmonth == "1",
select = c(vghrsday, vghrsweek, vgdaysweek))
cannabismonth_no_ds1 <- subset(ds1canscreen, alcsudmonth == "0", select
= c(vghrsday, vghrsweek, vgdaysweek))

#### Create Study 2 Care Receipt Datasets
ds2anyscreen <- subset(ds2, anyscreen == "1", select = age:vgdaysweek)
anycaredis_yes_ds2 <- subset(ds2anyscreen, anydis == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycaredis_no_ds2 <- subset(ds2anyscreen, anydis == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycareyear_yes_ds2 <- subset(ds2anyscreen, anyyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycareyear_no_ds2 <- subset(ds2anyscreen, anyyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycaremonth_yes_ds2 <- subset(ds2anyscreen, anymonth == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
anycaremonth_no_ds2 <- subset(ds2anyscreen, anymonth == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
ds2anymhscreen <- subset(ds2, anymhscreen == "1", select =
age:vgdaysweek)
mhdis_yes_ds2 <- subset(ds2anymhscreen, mhdis == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhdis_no_ds2 <- subset(ds2anymhscreen, mhdis == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhyear_yes_ds2 <- subset(ds2anymhscreen, mhyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhyear_no_ds2 <- subset(ds2anymhscreen, mhyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhmonth_yes_ds2 <- subset(ds2anymhscreen, mhmonth == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
mhmonth_no_ds2 <- subset(ds2anymhscreen, mhmonth == "0", select =
```

```
c(vghrsday, vghrsweek, vgdaysweek))
ds2ptsd <- subset(ds2, ptsd == "1", select = age:vgdaysweek)
ptsddis_yes_ds2 <- subset(ds2ptsd, mhdis == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
ptsddis_no_ds2 <- subset(ds2ptsd, mhdis == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
ptsdyear_yes_ds2 <- subset(ds2ptsd, mhyear == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
ptsdyear_no_ds2 <- subset(ds2ptsd, mhyear == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
ptsdmonth_yes_ds2 <- subset(ds2ptsd, mhmonth == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
ptsdmonth_no_ds2 <- subset(ds2ptsd, mhmonth == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
ds2depression <- subset(ds2, depression == "1", select = age:vgdaysweek)
depressiondis_yes_ds2 <- subset(ds2depression, mhdis == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
depressiondis_no_ds2 <- subset(ds2depression, mhdis == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
depressionyear_yes_ds2 <- subset(ds2depression, mhyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
depressionyear_no_ds2 <- subset(ds2depression, mhyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
depressionmonth_yes_ds2 <- subset(ds2depression, mhmonth == "1", select
= c(vghrsday, vghrsweek, vgdaysweek))
depressionmonth_no_ds2 <- subset(ds2depression, mhmonth == "0", select
= c(vghrsday, vghrsweek, vgdaysweek))
ds2anysudscreen <- subset(ds2, anysudscreen == "1", select =
age:vgdaysweek)
anysudscreendis_yes_ds2 <- subset(ds2anysudscreen, alcsuddis == "1",
select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreendis_no_ds2 <- subset(ds2anysudscreen, alcsuddis == "0",
select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreenyear_yes_ds2 <- subset(ds2anysudscreen, alcsudyear == "1",
select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreenyear_no_ds2 <- subset(ds2anysudscreen, alcsudyear == "0",
select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreenmonth_yes_ds2 <- subset(ds2anysudscreen, alcsudmonth ==
"1", select = c(vghrsday, vghrsweek, vgdaysweek))
anysudscreenmonth_no_ds2 <- subset(ds2anysudscreen, alcsudmonth ==
"0", select = c(vghrsday, vghrsweek, vgdaysweek))
ds2audit <- subset(ds2, audit == "1", select = age:vgdaysweek)
auditdis_yes_ds2 <- subset(ds2audit, alcsuddis == "1", select = c(vghrsday,
vghrsweek, vgdaysweek))
auditdis_no_ds2 <- subset(ds2audit, alcsuddis == "0", select = c(vghrsday,
vghrsweek, vgdaysweek))
audityear_yes_ds2 <- subset(ds2audit, alcsudyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
audityear_no_ds2 <- subset(ds2audit, alcsudyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
```

```
auditmonth_yes_ds2 <- subset(ds2audit, alcsudmonth == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
auditmonth_no_ds2 <- subset(ds2audit, alcsudmonth == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
ds2canscreen <- subset(ds2, canscreen == "1", select = age:vgdaysweek)
cannabisdis_yes_ds2 <- subset(ds2canscreen, alcsuddis == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
cannabisdis_no_ds2 <- subset(ds2canscreen, alcsuddis == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
cannabisyear_yes_ds2 <- subset(ds2canscreen, alcsudyear == "1", select =
c(vghrsday, vghrsweek, vgdaysweek))
cannabisyear_no_ds2 <- subset(ds2canscreen, alcsudyear == "0", select =
c(vghrsday, vghrsweek, vgdaysweek))
cannabismonth_yes_ds2 <- subset(ds2canscreen, alcsudmonth == "1",
select = c(vghrsday, vghrsweek, vgdaysweek))
cannabismonth_no_ds2 <- subset(ds2canscreen, alcsudmonth == "0", select
= c(vghrsday, vghrsweek, vgdaysweek))
```

Demographics

Age

```
# Study 1
ds1_age <- subset(ds1, select = c(age))
ds1_age <- data.frame(mean = apply(ds1_age, 2, mean), sd =
apply(ds1_age, 2, sd), n = colSums(!is.na(ds1_age)))

# Study 2
ds2_age <- subset(ds2, select = c(age))
ds2_age <- data.frame(mean = apply(ds2_age, 2, mean), sd =
apply(ds2_age, 2, sd), n = colSums(!is.na(ds2_age)))

# Combined
dboth_age <- rbind(ds1_age, ds2_age)
rownames(dboth_age) <- c("Study 1", "Study 2")
dboth_age

##           mean      sd   n
## Study 1 28.35714 3.364383 350
## Study 2 28.72680 3.418982 582

# Welch Two Sample t-test
(diff_age <- t.test(age ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  age by study
## t = -1.6145, df = 744.59, p-value = 0.1068
## alternative hypothesis: true difference in means is not equal to 0
```

```
## 95 percent confidence interval:
##  -0.81915586  0.07983332
## sample estimates:
## mean in group 1 mean in group 2
##        28.35714        28.72680
```

Gender

```
# Percentages
attach(dboth)
dboth_gender <- table(study,gender)
colnames(dboth_gender) <- c("Female", "Male")
prop.table(dboth_gender, 1)

##      gender
## study     Female       Male
##     1 0.07449857 0.92550143
##     2 0.13230241 0.86769759

# Sample Sizes
margin.table(dboth_gender, 1)

## study
##   1   2
## 349 582

# Chi-squared test
chisq.test(dboth_gender)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_gender
## X-squared = 6.8329, df = 1, p-value = 0.008949
```

Hispanic ethnicity

```
# Percentages
attach(dboth)
dboth_hispanic <- table(study,hispanic)
colnames(dboth_hispanic) <- c("No", "Yes")
prop.table(dboth_hispanic, 1)

##      hispanic
## study        No       Yes
##     1 0.7936963 0.2063037
##     2 0.8969072 0.1030928
```

```
# Sample Sizes
margin.table(dboth_hispanic, 1)

## study
##   1   2
## 349 582

# Chi-squared test
chisq.test(dboth_hispanic)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_hispanic
## X-squared = 18.261, df = 1, p-value = 1.926e-05
```

Race

```
# Percentages
attach(dboth)
dboth_race <- table(study,racew)
colnames(dboth_race) <- c("Non-White", "White")
prop.table(dboth_race, 1)

##      racew
## study Non-White     White
##     1 0.2200000 0.7800000
##     2 0.1426117 0.8573883

# Sample Sizes
margin.table(dboth_race, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_race)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_race
## X-squared = 8.6688, df = 1, p-value = 0.003237
```

Highest education level

```
# Percentages
attach(dboth)
dboth_education <- table(study,educationc)
```

```
colnames(dboth_education) <- c("Not College Graduate", "College Graduate")
prop.table(dboth_education, 1)

##     educationc
## study Not College Graduate College Graduate
##    1          0.8171429       0.1828571
##    2          0.8006873       0.1993127

# Sample Sizes
margin.table(dboth_education, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_education)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_education
## X-squared = 0.28153, df = 1, p-value = 0.5957
```

Currently in college

```
# Percentages
attach(dboth)
dboth_college <- table(study,collegeyes)
colnames(dboth_college) <- c("Not in College", "In College")
prop.table(dboth_college, 1)

##     collegeyes
## study Not in College In College
##    1     0.5342857  0.4657143
##    2     0.6563574  0.3436426

# Sample Sizes
margin.table(dboth_college, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_college)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
```

```
## data:  dboth_college
## X-squared = 13.188, df = 1, p-value = 0.0002817
```

Annual household income

```
# Percentages
attach(dboth)
dboth_income <- table(study,income)
colnames(dboth_income) <- c("Less than $10,000", "$10,000 to $14,999",
"$15,000 to $24,999", "$25,000 to $49,999", "$50,000 to $99,999",
"$100,000 to $149,999", "$150,000 to $199,999", "$200,000 or more")
prop.table(dboth_income, 1)

##      income
## study Less than $10,000 $10,000 to $14,999 $15,000 to $24,999
##     1       0.082857143        0.082857143        0.200000000
##     2       0.054982818        0.079037801        0.154639175
##      income
## study $25,000 to $49,999 $50,000 to $99,999 $100,000 to $149,999
##     1        0.345714286        0.240000000         0.040000000
##     2        0.408934708        0.243986254         0.048109966
##      income
## study $150,000 to $199,999 $200,000 or more
##     1         0.008571429      0.000000000
##     2         0.008591065      0.001718213

# Sample Sizes
margin.table(dboth_income, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_income)

##
##  Pearson's Chi-squared test
##
## data:  dboth_income
## X-squared = 8.4563, df = 7, p-value = 0.2941
```

Marital status

```
# Percentages
attach(dboth)
dboth_married <- table(study,married)
colnames(dboth_married) <- c("Not Married", "Married")
prop.table(dboth_married, 1)
```

```
##      married
## study Not Married   Married
##     1   0.4685714 0.5314286
##     2   0.5223368 0.4776632

# Sample Sizes
margin.table(dboth_married, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_married)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_married
## X-squared = 2.3168, df = 1, p-value = 0.128
```

Children

```
# Study 1
ds1_children <- subset(ds1, select = c(children))
ds1_children <- data.frame(mean = apply(ds1_children, 2, mean), sd =
apply(ds1_children, 2, sd), n = colSums(!is.na(ds1_children)))

# Study 2
ds2_children <- subset(ds2, select = c(children))
ds2_children <- data.frame(mean = apply(ds2_children, 2, mean), sd =
apply(ds2_children, 2, sd), n = colSums(!is.na(ds2_children)))

# Combined
dboth_children <- rbind(ds1_children, ds2_children)
rownames(dboth_children) <- c("Study 1", "Study 2")
dboth_children

##           mean      sd   n
## Study 1 1.425714 1.463568 350
## Study 2 1.281787 1.420157 582

# Welch Two Sample t-test
(diff_children <- t.test(children ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  children by study
## t = 1.4701, df = 717.87, p-value = 0.142
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.04828768  0.33614236
## sample estimates:
## mean in group 1 mean in group 2
##       1.425714       1.281787
```

Children living at home

```
# Study 1
ds1_childrenhome <- subset(ds1, select = c(childrenathome))
ds1_childrenhome <- na.omit(ds1_childrenhome)
ds1_childrenhome <- data.frame(mean = apply(ds1_childrenhome, 2, mean),
sd = apply(ds1_childrenhome, 2, sd), n = colSums(!is.na(ds1_childrenhome)))

# Study 2
ds2_childrenhome <- subset(ds2, select = c(childrenathome))
ds2_childrenhome <- na.omit(ds2_childrenhome)
ds2_childrenhome <- data.frame(mean = apply(ds2_childrenhome, 2, mean),
sd = apply(ds2_childrenhome, 2, sd), n = colSums(!is.na(ds2_childrenhome)))

# Combined
dboth_childrenhome <- rbind(ds1_childrenhome, ds2_childrenhome)
rownames(dboth_childrenhome) <- c("Study 1", "Study 2")
dboth_childrenhome

##           mean      sd   n
## Study 1 1.715596 1.136668 218
## Study 2 1.738506 1.273996 348

# Welch Two Sample t-test
(diff_childrenhome <- t.test(childrenathome ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  childrenathome by study
## t = -0.22261, df = 499.48, p-value = 0.8239
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.2251010  0.1792822
## sample estimates:
## mean in group 1 mean in group 2
##       1.715596       1.738506
```

Military branch

```
# Percentages
attach(dboth)
dboth_branch <- table(study,branch)
colnames(dboth_branch) <- c("Air Force", "Army", "Marine Corps", "Navy")
prop.table(dboth_branch, 1)

##      branch
## study  Air Force      Army Marine Corps      Navy
##     1 0.06285714 0.61428571   0.24857143 0.07428571
##     2 0.09793814 0.59793814   0.22164948 0.08247423

# Sample Sizes
margin.table(dboth_branch, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_branch)

##
##  Pearson's Chi-squared test
##
## data:  dboth_branch
## X-squared = 4.1381, df = 3, p-value = 0.2469
```

Behavioral Health

PTSD

```
# Percentages
attach(dboth)
dboth_ptsd <- table(study,ptsd)
colnames(dboth_ptsd) <- c("No", "Yes")
prop.table(dboth_ptsd, 1)

##      ptsd
## study       No      Yes
##     1 0.5657143 0.4342857
##     2 0.6099656 0.3900344

# Sample Sizes
margin.table(dboth_ptsd, 1)

## study
##   1   2
## 350 582
```

```
# Chi-squared test
chisq.test(dboth_ptsd)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_ptsd
## X-squared = 1.5951, df = 1, p-value = 0.2066
```

Depression

```
# Percentages
attach(dboth)
dboth_depression <- table(study,depression)
colnames(dboth_depression) <- c("No", "Yes")
prop.table(dboth_depression, 1)

##      depression
## study       No      Yes
##     1 0.5171429 0.4828571
##     2 0.5343643 0.4656357

# Sample Sizes
margin.table(dboth_depression, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_depression)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_depression
## X-squared = 0.19558, df = 1, p-value = 0.6583
```

AUDIT

```
# Percentages
attach(dboth)
dboth_audit <- table(study,audit)
colnames(dboth_audit) <- c("No", "Yes")
prop.table(dboth_audit, 1)

##      audit
## study       No      Yes
```

```
##     1 0.5685714 0.4314286
##     2 0.7010309 0.2989691

# Sample Sizes
margin.table(dboth_audit, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_audit)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_audit
## X-squared = 16.307, df = 1, p-value = 5.387e-05
```

Total drinking days

```
# Study 1
ds1_totdrinkdays <- subset(ds1, select = c(totdrinkdays))
ds1_totdrinkdays <- na.omit(ds1_totdrinkdays)
ds1_totdrinkdays <- data.frame(mean = apply(ds1_totdrinkdays, 2, mean),
sd = apply(ds1_totdrinkdays, 2, sd), n = colSums(!is.na(ds1_totdrinkdays)))

# Study 2
ds2_totdrinkdays <- subset(ds2, select = c(totdrinkdays))
ds2_totdrinkdays <- na.omit(ds2_totdrinkdays)
ds2_totdrinkdays <- data.frame(mean = apply(ds2_totdrinkdays, 2, mean),
sd = apply(ds2_totdrinkdays, 2, sd), n = colSums(!is.na(ds2_totdrinkdays)))

# Combined
dboth_totdrinkdays <- rbind(ds1_totdrinkdays, ds2_totdrinkdays)
rownames(dboth_totdrinkdays) <- c("Study 1", "Study 2")
dboth_totdrinkdays

##           mean      sd   n
## Study 1 10.43714 9.070579 350
## Study 2 12.39175 8.752347 582

# Welch Two Sample t-test
(dboth_totdrinkdays <- t.test(totdrinkdays ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  totdrinkdays by study
## t = -3.2278, df = 714.65, p-value = 0.001304
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -3.1434843 -0.7657351
## sample estimates:
## mean in group 1 mean in group 2
##       10.43714       12.39175
```

Drinks per drinking day

```
# Study 1
ds1_avgdrinksday <- subset(ds1, select = c(avgdrinksday))
ds1_avgdrinksday <- na.omit(ds1_avgdrinksday)
ds1_avgdrinksday <- data.frame(mean = apply(ds1_avgdrinksday, 2, mean),
sd = apply(ds1_avgdrinksday, 2, sd), n = colSums(!is.na(ds1_avgdrinksday)))

# Study 2
ds2_avgdrinksday <- subset(ds2, select = c(avgdrinksday))
ds2_avgdrinksday <- na.omit(ds2_avgdrinksday)
ds2_avgdrinksday <- data.frame(mean = apply(ds2_avgdrinksday, 2, mean),
sd = apply(ds2_avgdrinksday, 2, sd), n = colSums(!is.na(ds2_avgdrinksday)))

# Combined
dboth_avgdrinksday <- rbind(ds1_avgdrinksday, ds2_avgdrinksday)
rownames(dboth_avgdrinksday) <- c("Study 1", "Study 2")
dboth_avgdrinksday

##           mean      sd   n
## Study 1 4.818182 4.252064 319
## Study 2 4.738977 3.285413 567

# Welch Two Sample t-test
(dboth_avgdrinksday <- t.test(avgdrinksday ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  avgdrinksday by study
## t = 0.28785, df = 533.67, p-value = 0.7736
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4613290  0.6197385
## sample estimates:
## mean in group 1 mean in group 2
##       4.818182       4.738977
```

Heavy drinking occasions

```
# Study 1
ds1_heavydrink <- subset(ds1, select = c(heavydrink))
ds1_heavydrink <- na.omit(ds1_heavydrink)
ds1_heavydrink <- data.frame(mean = apply(ds1_heavydrink, 2, mean), sd =
apply(ds1_heavydrink, 2, sd), n = colSums(!is.na(ds1_heavydrink)))

# Study 2
ds2_heavydrink <- subset(ds2, select = c(heavydrink))
ds2_heavydrink <- na.omit(ds2_heavydrink)
ds2_heavydrink <- data.frame(mean = apply(ds2_heavydrink, 2, mean), sd =
apply(ds2_heavydrink, 2, sd), n = colSums(!is.na(ds2_heavydrink)))

# Combined
dboth_heavydrink <- rbind(ds1_heavydrink, ds2_heavydrink)
rownames(dboth_heavydrink) <- c("Study 1", "Study 2")
dboth_heavydrink

##           mean      sd   n
## Study 1 4.637500 6.192307 320
## Study 2 5.784832 7.160422 567

# Welch Two Sample t-test
(dboth_heavydrink <- t.test(heavydrink ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  heavydrink by study
## t = -2.5022, df = 743.49, p-value = 0.01256
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.0475076 -0.2471573
## sample estimates:
## mean in group 1 mean in group 2
##        4.637500        5.784832
```

Peak drinks on a drinking day

```
# Study 1
ds1_peakdrink <- subset(ds1, select = c(peakdrink))
ds1_peakdrink <- na.omit(ds1_peakdrink)
ds1_peakdrink <- data.frame(mean = apply(ds1_peakdrink, 2, mean), sd =
apply(ds1_peakdrink, 2, sd), n = colSums(!is.na(ds1_peakdrink)))

# Study 2
ds2_peakdrink <- subset(ds2, select = c(peakdrink))
ds2_peakdrink <- na.omit(ds2_peakdrink)
ds2_peakdrink <- data.frame(mean = apply(ds2_peakdrink, 2, mean), sd =
```

```
apply(ds2_peakdrink, 2, sd), n = colSums(!is.na(ds2_peakdrink)))

# Combined
dboth_peakdrink <- rbind(ds1_peakdrink, ds2_peakdrink)
rownames(dboth_peakdrink) <- c("Study 1", "Study 2")
dboth_peakdrink

##           mean      sd   n
## Study 1 8.479495 5.955828 317
## Study 2 9.389771 6.044719 567

# Welch Two Sample t-test
(dboth_peakdrink <- t.test(peakdrink ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  peakdrink by study
## t = -2.1677, df = 662.16, p-value = 0.03054
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.73482915 -0.08572176
## sample estimates:
## mean in group 1 mean in group 2
##       8.479495       9.389771
```

Alcohol consequences

```
# Study 1
ds1_BYAACQ <- subset(ds1, select = c(BYAACQ))
ds1_BYAACQ <- na.omit(ds1_BYAACQ)
ds1_BYAACQ <- data.frame(mean = apply(ds1_BYAACQ, 2, mean), sd =
apply(ds1_BYAACQ, 2, sd), n = colSums(!is.na(ds1_BYAACQ)))

# Study 2
ds2_BYAACQ <- subset(ds2, select = c(BYAACQ))
ds2_BYAACQ <- na.omit(ds2_BYAACQ)
ds2_BYAACQ <- data.frame(mean = apply(ds2_BYAACQ, 2, mean), sd =
apply(ds2_BYAACQ, 2, sd), n = colSums(!is.na(ds2_BYAACQ)))

# Combined
dboth_BYAACQ <- rbind(ds1_BYAACQ, ds2_BYAACQ)
rownames(dboth_BYAACQ) <- c("Study 1", "Study 2")
dboth_BYAACQ

##           mean      sd   n
## Study 1 7.818750 7.128355 320
## Study 2 7.546392 6.790731 582
```

```
# Welch Two Sample t-test
(dboth_BYAACQ <- t.test(BYAACQ ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  BYAACQ by study
## t = 0.55825, df = 630.57, p-value = 0.5769
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6857055  1.2304220
## sample estimates:
## mean in group 1 mean in group 2
##       7.818750       7.546392
```

Any cannabis use in past 6 months

```
# Percentages
attach(dboth)
dboth_anycannabis <- table(study,anycannabis)
colnames(dboth_anycannabis) <- c("No", "Yes")
prop.table(dboth_anycannabis, 1)

##      anycannabis
## study       No       Yes
##     1 0.5810277 0.4189723
##     2 0.7096220 0.2903780

# Sample Sizes
margin.table(dboth_anycannabis, 1)

## study
##   1   2
## 253 582

# Chi-squared test
chisq.test(dboth_anycannabis)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_anycannabis
## X-squared = 12.627, df = 1, p-value = 0.0003803
```

Total cannabis use days in past 30 days

```
# Study 1
ds1_totcannabis <- subset(ds1, select = c(totcannabis))
ds1_totcannabis <- na.omit(ds1_totcannabis)
```

```r
ds1_totcannabis <- data.frame(mean = apply(ds1_totcannabis, 2, mean), sd = apply(ds1_totcannabis, 2, sd), n = colSums(!is.na(ds1_totcannabis)))

# Study 2
ds2_totcannabis <- subset(ds2, select = c(totcannabis))
ds2_totcannabis <- na.omit(ds2_totcannabis)
ds2_totcannabis <- data.frame(mean = apply(ds2_totcannabis, 2, mean), sd = apply(ds2_totcannabis, 2, sd), n = colSums(!is.na(ds2_totcannabis)))

# Combined
dboth_totcannabis <- rbind(ds1_totcannabis, ds2_totcannabis)
rownames(dboth_totcannabis) <- c("Study 1", "Study 2")
dboth_totcannabis

##           mean       sd   n
## Study 1 9.872093 11.428341  86
## Study 2 3.347079  8.584288 582

# Welch Two Sample t-test
(dboth_totcannabis <- t.test(totcannabis ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  totcannabis by study
## t = 5.087, df = 99.663, p-value = 1.713e-06
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  3.980082 9.069946
## sample estimates:
## mean in group 1 mean in group 2
##       9.872093        3.347079
```

Care Receipt

Behavioral Health - Discharge

```r
# Percentages
attach(dboth)
dboth_anydis <- table(study,anydis)
colnames(dboth_anydis) <- c("No", "Yes")
prop.table(dboth_anydis, 1)

##      anydis
## study       No       Yes
##     1 0.4771429 0.5228571
##     2 0.4192440 0.5807560
```

```
# Sample Sizes
margin.table(dboth_anydis, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_anydis)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_anydis
## X-squared = 2.7419, df = 1, p-value = 0.09775
```

Behavioral Health - Year

```
# Percentages
attach(dboth)
dboth_anyyear <- table(study,anyyear)
colnames(dboth_anyyear) <- c("No", "Yes")
prop.table(dboth_anyyear, 1)

##      anyyear
## study       No       Yes
##     1 0.6600000 0.3400000
##     2 0.5910653 0.4089347

# Sample Sizes
margin.table(dboth_anyyear, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_anyyear)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_anyyear
## X-squared = 4.108, df = 1, p-value = 0.04268
```

Behavioral Health - Month

```
# Percentages
attach(dboth)
dboth_anymonth <- table(study,anymonth)
```

```
colnames(dboth_anymonth) <- c("No", "Yes")
prop.table(dboth_anymonth, 1)

##      anymonth
## study       No      Yes
##     1 0.8800000 0.1200000
##     2 0.8264605 0.1735395

# Sample Sizes
margin.table(dboth_anymonth, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_anymonth)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_anymonth
## X-squared = 4.4199, df = 1, p-value = 0.03552
```

Mental Health - Discharge

```
# Percentages
attach(dboth)
dboth_mhdis <- table(study,mhdis)
colnames(dboth_mhdis) <- c("No", "Yes")
prop.table(dboth_mhdis, 1)

##      mhdis
## study       No      Yes
##     1 0.5000000 0.5000000
##     2 0.4501718 0.5498282

# Sample Sizes
margin.table(dboth_mhdis, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_mhdis)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
```

```
## data:  dboth_mhdis
## X-squared = 1.9836, df = 1, p-value = 0.159
```

Mental Health - Year

```
# Percentages
attach(dboth)
dboth_mhyear <- table(study,mhyear)
colnames(dboth_mhyear) <- c("No", "Yes")
prop.table(dboth_mhyear, 1)

##      mhyear
## study       No      Yes
##     1 0.6685714 0.3314286
##     2 0.6082474 0.3917526

# Sample Sizes
margin.table(dboth_mhyear, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_mhyear)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_mhyear
## X-squared = 3.1613, df = 1, p-value = 0.0754
```

Mental Health - Month

```
# Percentages
attach(dboth)
dboth_mhmonth <- table(study,mhmonth)
colnames(dboth_mhmonth) <- c("No", "Yes")
prop.table(dboth_mhmonth, 1)

##      mhmonth
## study       No      Yes
##     1 0.8800000 0.1200000
##     2 0.8316151 0.1683849

# Sample Sizes
margin.table(dboth_mhmonth, 1)
```

```
## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_mhmonth)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_mhmonth
## X-squared = 3.6383, df = 1, p-value = 0.05646
```

'

Substance Use - Discharge

```
# Percentages
attach(dboth)
dboth_alcsuddis <- table(study,alcsuddis)
colnames(dboth_alcsuddis) <- c("No", "Yes")
prop.table(dboth_alcsuddis, 1)

##      alcsuddis
## study       No       Yes
##     1 0.8085714 0.1914286
##     2 0.7920962 0.2079038

# Sample Sizes
margin.table(dboth_alcsuddis, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_alcsuddis)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_alcsuddis
## X-squared = 0.27321, df = 1, p-value = 0.6012
```

'

Substance Use - Year

```
# Percentages
attach(dboth)
dboth_alcsudyear <- table(study,alcsudyear)
colnames(dboth_alcsudyear) <- c("No", "Yes")
prop.table(dboth_alcsudyear, 1)
```

```
##      alcsudyear
## study        No       Yes
##     1 0.91142857 0.08857143
##     2 0.88659794 0.11340206

# Sample Sizes
margin.table(dboth_alcsudyear, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_alcsudyear)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_alcsudyear
## X-squared = 1.1912, df = 1, p-value = 0.2751
```

Substance Use - Month

```
# Percentages
attach(dboth)
dboth_alcsudmonth <- table(study,alcsudmonth)
colnames(dboth_alcsudmonth) <- c("No", "Yes")
prop.table(dboth_alcsudmonth, 1)

##      alcsudmonth
## study         No        Yes
##     1 0.997142857 0.002857143
##     2 0.969072165 0.030927835

# Sample Sizes
margin.table(dboth_alcsudmonth, 1)

## study
##   1   2
## 350 582

# Chi-squared test
chisq.test(dboth_alcsudmonth)

##
##  Pearson's Chi-squared test with Yates' continuity correction
##
## data:  dboth_alcsudmonth
## X-squared = 7.2753, df = 1, p-value = 0.006991
```

Video Game Behavior

Total hours spent playing per day

```
# Study 1
ds1_vghrsday <- subset(ds1, select = c(vghrsday))
ds1_vghrsday <- na.omit(ds1_vghrsday)
ds1_vghrsday <- data.frame(mean = apply(ds1_vghrsday, 2, mean), sd =
apply(ds1_vghrsday, 2, sd), n = colSums(!is.na(ds1_vghrsday)))

# Study 2
ds2_vghrsday <- subset(ds2, select = c(vghrsday))
ds2_vghrsday <- na.omit(ds2_vghrsday)
ds2_vghrsday <- data.frame(mean = apply(ds2_vghrsday, 2, mean), sd =
apply(ds2_vghrsday, 2, sd), n = colSums(!is.na(ds2_vghrsday)))

# Combined
dboth_vghrsday <- rbind(ds1_vghrsday, ds2_vghrsday)
rownames(dboth_vghrsday) <- c("Study 1", "Study 2")
dboth_vghrsday

##           mean      sd   n
## Study 1 2.311429 1.80659 350
## Study 2 3.541237 3.24939 582

# Welch Two Sample t-test
(dboth_vghrsday <- t.test(vghrsday ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by study
## t = -7.4205, df = 924.95, p-value = 2.641e-13
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.5550615 -0.9045556
## sample estimates:
## mean in group 1 mean in group 2
##       2.311429        3.541237
```

Total hours spent playing per week

```
# Study 1
ds1_vghrsweek <- subset(ds1, select = c(vghrsweek))
ds1_vghrsweek <- na.omit(ds1_vghrsweek)
ds1_vghrsweek <- data.frame(mean = apply(ds1_vghrsweek, 2, mean), sd =
apply(ds1_vghrsweek, 2, sd), n = colSums(!is.na(ds1_vghrsweek)))

# Study 2
```

```
ds2_vghrsweek <- subset(ds2, select = c(vghrsweek))
ds2_vghrsweek <- na.omit(ds2_vghrsweek)
ds2_vghrsweek <- data.frame(mean = apply(ds2_vghrsweek, 2, mean), sd =
apply(ds2_vghrsweek, 2, sd), n = colSums(!is.na(ds2_vghrsweek)))

# Combined
dboth_vghrsweek <- rbind(ds1_vghrsweek, ds2_vghrsweek)
rownames(dboth_vghrsweek) <- c("Study 1", "Study 2")
dboth_vghrsweek

##           mean      sd   n
## Study 1 12.80857 13.50625 350
## Study 2 18.36426 21.89675 582

# Welch Two Sample t-test
(dboth_vghrsweek <- t.test(vghrsweek ~ study, data=dboth))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by study
## t = -4.7904, df = 929.41, p-value = 1.936e-06
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -7.831726 -3.279654
## sample estimates:
## mean in group 1 mean in group 2
##       12.80857       18.36426
```

Total days spent playing per week

```
# Study 1
ds1_vgdaysweek <- subset(ds1, select = c(vgdaysweek))
ds1_vgdaysweek <- na.omit(ds1_vgdaysweek)
ds1_vgdaysweek <- data.frame(mean = apply(ds1_vgdaysweek, 2, mean), sd
= apply(ds1_vgdaysweek, 2, sd), n = colSums(!is.na(ds1_vgdaysweek)))

# Study 2
ds2_vgdaysweek <- subset(ds2, select = c(vgdaysweek))
ds2_vgdaysweek <- na.omit(ds2_vgdaysweek)
ds2_vgdaysweek <- data.frame(mean = apply(ds2_vgdaysweek, 2, mean), sd
= apply(ds2_vgdaysweek, 2, sd), n = colSums(!is.na(ds2_vgdaysweek)))

# Combined
dboth_vgdaysweek <- rbind(ds1_vgdaysweek, ds2_vgdaysweek)
rownames(dboth_vgdaysweek) <- c("Study 1", "Study 2")
dboth_vgdaysweek
```

```
##           mean      sd   n
## Study 1 5.028571 2.283436 350
## Study 2 4.723368 2.214202 582
```

```
# Welch Two Sample t-test
(dboth_vgdaysweek <- t.test(vgdaysweek ~ study, data=dboth))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by study
## t = 1.9985, df = 717.48, p-value = 0.04603
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.005386123 0.605021339
## sample estimates:
## mean in group 1 mean in group 2
##       5.028571       4.723368
```

Any positive screen

Replicated Effect

Hours per day

Study 1

```
(vghrsday_anyscreen_ds1 <- t.test(vghrsday ~ anyscreen, data=ds1))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsday by anyscreen
## t = -1.1898, df = 137.56, p-value = 0.2362
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.7367650  0.1832053
## sample estimates:
## mean in group 0 mean in group 1
##       2.103448       2.380228
```

Study 2

```
(vghrsday_anyscreen_ds2 <- t.test(vghrsday ~ anyscreen, data=ds2))
```

```
##
##  Welch Two Sample t-test
##
```

```
## data:  vghrsday by anyscreen
## t = -1.3004, df = 260.62, p-value = 0.1946
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.947307  0.193740
## sample estimates:
## mean in group 0 mean in group 1
##        3.251852        3.628635
```

Hours per week

Study 1

```
(vghrsweek_anyscreen_ds1 <- t.test(vghrsweek ~ anyscreen, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anyscreen
## t = -1.4503, df = 142.17, p-value = 0.1492
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -5.8319900  0.8959295
## sample estimates:
## mean in group 0 mean in group 1
##        10.95402        13.42205
```

Study 2

```
(vghrsweek_anyscreen_ds2 <- t.test(vghrsweek ~ anyscreen, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anyscreen
## t = -1.4505, df = 270.15, p-value = 0.1481
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -6.5517454  0.9931076
## sample estimates:
## mean in group 0 mean in group 1
##        16.22963        19.00895
```

Days per week

Study 1

```
(vgdaysweek_anyscreen_ds1 <- t.test(vgdaysweek ~ anyscreen, data=ds1))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anyscreen
## t = -1.799, df = 137.54, p-value = 0.07421
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.10732457  0.05230076
## sample estimates:
## mean in group 0 mean in group 1
##        4.632184        5.159696
```

Study 2

```
(vgdaysweek_anyscreen_ds2 <- t.test(vgdaysweek ~ anyscreen, data=ds2))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anyscreen
## t = -0.90454, df = 216.96, p-value = 0.3667
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6332657  0.2348565
## sample estimates:
## mean in group 0 mean in group 1
##        4.570370        4.769575
```

MD

Hours per day

```
#Study 1
anyscreen_yes_ds1_vghrsday <- subset(anyscreen_yes_ds1, select =
c(vghrsday)) #Subset 1i data
anyscreen_vghrsday_m1i <- apply(anyscreen_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
anyscreen_vghrsday_sd1i <- apply(anyscreen_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
anyscreen_vghrsday_n1i <- colSums(!is.na(anyscreen_yes_ds1_vghrsday))
#Calculate n1i
anyscreen_no_ds1_vghrsday <- subset(anyscreen_no_ds1, select =
c(vghrsday)) #Subset 2i data
anyscreen_vghrsday_m2i <- apply(anyscreen_no_ds1_vghrsday, 2, mean)
#Calculate m2i
anyscreen_vghrsday_sd2i <- apply(anyscreen_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
anyscreen_vghrsday_n2i <- colSums(!is.na(anyscreen_no_ds1_vghrsday))
```

```r
#Calculate n2i
ds1anyscreen_meta <- data.frame(m1i = anyscreen_vghrsday_m1i, sd1i =
anyscreen_vghrsday_sd1i, n1i = anyscreen_vghrsday_n1i, m2i =
anyscreen_vghrsday_m2i, sd2i = anyscreen_vghrsday_sd2i, n2i =
anyscreen_vghrsday_n2i) #MA dataframe
ds1anyscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anyscreen_meta) #Calculate
yi and vi

#Study 2
anyscreen_yes_ds2_vghrsday <- subset(anyscreen_yes_ds2, select =
c(vghrsday)) #Subset 1i data
anyscreen_vghrsday_m1i <- apply(anyscreen_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
anyscreen_vghrsday_sd1i <- apply(anyscreen_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
anyscreen_vghrsday_n1i <- colSums(!is.na(anyscreen_yes_ds2_vghrsday))
#Calculate n1i
anyscreen_no_ds2_vghrsday <- subset(anyscreen_no_ds2, select =
c(vghrsday)) #Subset 2i data
anyscreen_vghrsday_m2i <- apply(anyscreen_no_ds2_vghrsday, 2, mean)
#Calculate m2i
anyscreen_vghrsday_sd2i <- apply(anyscreen_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
anyscreen_vghrsday_n2i <- colSums(!is.na(anyscreen_no_ds2_vghrsday))
#Calculate n2i
ds2anyscreen_meta <- data.frame(m1i = anyscreen_vghrsday_m1i, sd1i =
anyscreen_vghrsday_sd1i, n1i = anyscreen_vghrsday_n1i, m2i =
anyscreen_vghrsday_m2i, sd2i = anyscreen_vghrsday_sd2i, n2i =
anyscreen_vghrsday_n2i) #MA dataframe
ds2anyscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anyscreen_meta) #Calculate
yi and vi

#FE meta-analysis
(anyscreen_meta <- rbind(ds1anyscreen_meta, ds2anyscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 2.380228 1.766932 263 2.103448 1.917086  87 0.2768 0.0541
## 2 3.628635 3.368395 447 3.251852 2.811805 135 0.3768 0.0839

(any_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anyscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0724, p-val = 0.7878
##
## Model Results:
```

```
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.3160   0.1814   1.7419   0.0815  -0.0395   0.6715       .
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
anyscreen_yes_ds1_vghrsweek <- subset(anyscreen_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
anyscreen_vghrsweek_m1i <- apply(anyscreen_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
anyscreen_vghrsweek_sd1i <- apply(anyscreen_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
anyscreen_vghrsweek_n1i <- colSums(!is.na(anyscreen_yes_ds1_vghrsweek))
#Calculate n1i
anyscreen_no_ds1_vghrsweek <- subset(anyscreen_no_ds1, select =
c(vghrsweek)) #Subset 2i data
anyscreen_vghrsweek_m2i <- apply(anyscreen_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
anyscreen_vghrsweek_sd2i <- apply(anyscreen_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
anyscreen_vghrsweek_n2i <- colSums(!is.na(anyscreen_no_ds1_vghrsweek))
#Calculate n2i
ds1anyscreen_meta <- data.frame(m1i = anyscreen_vghrsweek_m1i, sd1i =
anyscreen_vghrsweek_sd1i, n1i = anyscreen_vghrsweek_n1i, m2i =
anyscreen_vghrsweek_m2i, sd2i = anyscreen_vghrsweek_sd2i, n2i =
anyscreen_vghrsweek_n2i) #MA dataframe
ds1anyscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anyscreen_meta) #Calculate
yi and vi

#Study 2
anyscreen_yes_ds2_vghrsweek <- subset(anyscreen_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
anyscreen_vghrsweek_m1i <- apply(anyscreen_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
anyscreen_vghrsweek_sd1i <- apply(anyscreen_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
anyscreen_vghrsweek_n1i <- colSums(!is.na(anyscreen_yes_ds2_vghrsweek))
#Calculate n1i
anyscreen_no_ds2_vghrsweek <- subset(anyscreen_no_ds2, select =
c(vghrsweek)) #Subset 2i data
anyscreen_vghrsweek_m2i <- apply(anyscreen_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
anyscreen_vghrsweek_sd2i <- apply(anyscreen_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
```

```
anyscreen_vghrsweek_n2i <- colSums(!is.na(anyscreen_no_ds2_vghrsweek))
#Calculate n2i
ds2anyscreen_meta <- data.frame(m1i = anyscreen_vghrsweek_m1i, sd1i =
anyscreen_vghrsweek_sd1i, n1i = anyscreen_vghrsweek_n1i, m2i =
anyscreen_vghrsweek_m2i, sd2i = anyscreen_vghrsweek_sd2i, n2i =
anyscreen_vghrsweek_n2i) #MA dataframe
ds2anyscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anyscreen_meta) #Calculate
yi and vi

#FE meta-analysis
(anyscreen_meta <- rbind(ds1anyscreen_meta, ds2anyscreen_meta))

##       m1i     sd1i n1i     m2i     sd2i n2i     yi     vi
## 1 13.42205 13.34598 263 10.95402 13.89320  87 2.4680 2.8959
## 2 19.00895 22.82925 447 16.22963 18.39165 135 2.7793 3.6715

(any_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anyscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0148, p-val = 0.9033
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   2.6053   1.2724   2.0476   0.0406   0.1115   5.0991      *
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
anyscreen_yes_ds1_vgdaysweek <- subset(anyscreen_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
anyscreen_vgdaysweek_m1i <- apply(anyscreen_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
anyscreen_vgdaysweek_sd1i <- apply(anyscreen_yes_ds1_vgdaysweek, 2,
sd) #Calculate sd1i
anyscreen_vgdaysweek_n1i <- colSums(!
is.na(anyscreen_yes_ds1_vgdaysweek)) #Calculate n1i
anyscreen_no_ds1_vgdaysweek <- subset(anyscreen_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
anyscreen_vgdaysweek_m2i <- apply(anyscreen_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
anyscreen_vgdaysweek_sd2i <- apply(anyscreen_no_ds1_vgdaysweek, 2, sd)
```

```r
#Calculate sd2i
anyscreen_vgdaysweek_n2i <- colSums(!
is.na(anyscreen_no_ds1_vgdaysweek)) #Calculate n2i
ds1anyscreen_meta <- data.frame(m1i = anyscreen_vgdaysweek_m1i, sd1i
= anyscreen_vgdaysweek_sd1i, n1i = anyscreen_vgdaysweek_n1i, m2i =
anyscreen_vgdaysweek_m2i, sd2i = anyscreen_vgdaysweek_sd2i, n2i =
anyscreen_vgdaysweek_n2i) #MA dataframe
ds1anyscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anyscreen_meta) #Calculate
yi and vi

#Study 2
anyscreen_yes_ds2_vgdaysweek <- subset(anyscreen_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
anyscreen_vgdaysweek_m1i <- apply(anyscreen_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
anyscreen_vgdaysweek_sd1i <- apply(anyscreen_yes_ds2_vgdaysweek, 2,
sd) #Calculate sd1i
anyscreen_vgdaysweek_n1i <- colSums(!
is.na(anyscreen_yes_ds2_vgdaysweek)) #Calculate n1i
anyscreen_no_ds2_vgdaysweek <- subset(anyscreen_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
anyscreen_vgdaysweek_m2i <- apply(anyscreen_no_ds2_vgdaysweek, 2,
mean) #Calculate m2i
anyscreen_vgdaysweek_sd2i <- apply(anyscreen_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
anyscreen_vgdaysweek_n2i <- colSums(!
is.na(anyscreen_no_ds2_vgdaysweek)) #Calculate n2i
ds2anyscreen_meta <- data.frame(m1i = anyscreen_vgdaysweek_m1i, sd1i
= anyscreen_vgdaysweek_sd1i, n1i = anyscreen_vgdaysweek_n1i, m2i =
anyscreen_vgdaysweek_m2i, sd2i = anyscreen_vgdaysweek_sd2i, n2i =
anyscreen_vgdaysweek_n2i) #MA dataframe
ds2anyscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anyscreen_meta) #Calculate
yi and vi

#FE meta-analysis
(anyscreen_meta <- rbind(ds1anyscreen_meta, ds2anyscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.159696 2.226911 263 4.632184 2.416585  87 0.5275 0.0860
## 2 4.769575 2.202356 447 4.570370 2.254484 135 0.1992 0.0485

(any_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anyscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.8015, p-val = 0.3706
```

```
##
## Model Results:
##
## estimate      se    zval    pval    ci.lb    ci.ub
##   0.3176   0.1761   1.8036   0.0713  -0.0275   0.6627       .
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Any mental health screen

Replicated Effect

Hours per day

Study 1

```
(vghrsday_anymhscreen_ds1 <- t.test(vghrsday ~ anymhscreen, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anymhscreen
## t = -2.9955, df = 324.01, p-value = 0.002951
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.9548135 -0.1978231
## sample estimates:
## mean in group 0 mean in group 1
##        2.033149        2.609467
```

'

Study 2

```
(vghrsday_anymhscreen_ds2 <- t.test(vghrsday ~ anymhscreen, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anymhscreen
## t = -2.5118, df = 577.59, p-value = 0.01228
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.1973751 -0.1465138
## sample estimates:
## mean in group 0 mean in group 1
##        3.197183        3.869128
```

Hours per week

Study 1

```
(vghrsweek_anymhscreen_ds1 <- t.test(vghrsweek ~ anymhscreen,
data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anymhscreen
## t = -3.1385, df = 320.04, p-value = 0.001856
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -7.340716 -1.683639
## sample estimates:
## mean in group 0 mean in group 1
##        10.62983        15.14201
```

Study 2

```
(vghrsweek_anymhscreen_ds2 <- t.test(vghrsweek ~ anymhscreen,
data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anymhscreen
## t = -2.8329, df = 570.62, p-value = 0.004776
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -8.622322 -1.561581
## sample estimates:
## mean in group 0 mean in group 1
##        15.75704        20.84899
```

Days per week

Study 1

```
(vgdaysweek_anymhscreen_ds1 <- t.test(vgdaysweek ~ anymhscreen,
data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anymhscreen
## t = -2.2251, df = 347.68, p-value = 0.02672
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.01682148 -0.06265154
## sample estimates:
## mean in group 0 mean in group 1
##       4.767956       5.307692
```

Study 2

```
(vgdaysweek_anymhscreen_ds2 <- t.test(vgdaysweek ~ anymhscreen,
data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anymhscreen
## t = -1.8544, df = 577.07, p-value = 0.0642
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.70004822  0.02011627
## sample estimates:
## mean in group 0 mean in group 1
##       4.549296       4.889262
```

MD

Hours per day

```
#Study 1
anymhscreen_yes_ds1_vghrsday <- subset(anymhscreen_yes_ds1, select =
c(vghrsday)) #Subset 1i data
anymhscreen_vghrsday_m1i <- apply(anymhscreen_yes_ds1_vghrsday, 2,
mean) #Calculate m1i
anymhscreen_vghrsday_sd1i <- apply(anymhscreen_yes_ds1_vghrsday, 2,
sd) #Calculate sd1i
anymhscreen_vghrsday_n1i <- colSums(!
is.na(anymhscreen_yes_ds1_vghrsday)) #Calculate n1i
anymhscreen_no_ds1_vghrsday <- subset(anymhscreen_no_ds1, select =
c(vghrsday)) #Subset 2i data
anymhscreen_vghrsday_m2i <- apply(anymhscreen_no_ds1_vghrsday, 2,
mean) #Calculate m2i
anymhscreen_vghrsday_sd2i <- apply(anymhscreen_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
anymhscreen_vghrsday_n2i <- colSums(!
is.na(anymhscreen_no_ds1_vghrsday)) #Calculate n2i
ds1anymhscreen_meta <- data.frame(m1i = anymhscreen_vghrsday_m1i,
sd1i = anymhscreen_vghrsday_sd1i, n1i = anymhscreen_vghrsday_n1i, m2i
= anymhscreen_vghrsday_m2i, sd2i = anymhscreen_vghrsday_sd2i, n2i =
```

```
anymhscreen_vghrsday_n2i) #MA dataframe
ds1anymhscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anymhscreen_meta)
#Calculate yi and vi

#Study 2
anymhscreen_yes_ds2_vghrsday <- subset(anymhscreen_yes_ds2, select =
c(vghrsday)) #Subset 1i data
anymhscreen_vghrsday_m1i <- apply(anymhscreen_yes_ds2_vghrsday, 2,
mean) #Calculate m1i
anymhscreen_vghrsday_sd1i <- apply(anymhscreen_yes_ds2_vghrsday, 2,
sd) #Calculate sd1i
anymhscreen_vghrsday_n1i <- colSums(!
is.na(anymhscreen_yes_ds2_vghrsday)) #Calculate n1i
anymhscreen_no_ds2_vghrsday <- subset(anymhscreen_no_ds2, select =
c(vghrsday)) #Subset 2i data
anymhscreen_vghrsday_m2i <- apply(anymhscreen_no_ds2_vghrsday, 2,
mean) #Calculate m2i
anymhscreen_vghrsday_sd2i <- apply(anymhscreen_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
anymhscreen_vghrsday_n2i <- colSums(!
is.na(anymhscreen_no_ds2_vghrsday)) #Calculate n2i
ds2anymhscreen_meta <- data.frame(m1i = anymhscreen_vghrsday_m1i,
sd1i = anymhscreen_vghrsday_sd1i, n1i = anymhscreen_vghrsday_n1i, m2i
= anymhscreen_vghrsday_m2i, sd2i = anymhscreen_vghrsday_sd2i, n2i =
anymhscreen_vghrsday_n2i) #MA dataframe
ds2anymhscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anymhscreen_meta)
#Calculate yi and vi

#FE meta-analysis
(anymhscreen_meta <- rbind(ds1anymhscreen_meta,
ds2anymhscreen_meta))

##       m1i    sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 2.609467 1.96733 169 2.033149 1.598265 181 0.5763 0.0370
## 2 3.869128 3.40721 298 3.197183 3.043244 284 0.6719 0.0716

(any_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anymhscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0842, p-val = 0.7717
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.6089   0.1562   3.8985   <.0001   0.3028   0.9151     ***
```

```
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
anymhscreen_yes_ds1_vghrsweek <- subset(anymhscreen_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
anymhscreen_vghrsweek_m1i <- apply(anymhscreen_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
anymhscreen_vghrsweek_sd1i <- apply(anymhscreen_yes_ds1_vghrsweek, 2,
sd) #Calculate sd1i
anymhscreen_vghrsweek_n1i <- colSums(!
is.na(anymhscreen_yes_ds1_vghrsweek)) #Calculate n1i
anymhscreen_no_ds1_vghrsweek <- subset(anymhscreen_no_ds1, select =
c(vghrsweek)) #Subset 2i data
anymhscreen_vghrsweek_m2i <- apply(anymhscreen_no_ds1_vghrsweek, 2,
mean) #Calculate m2i
anymhscreen_vghrsweek_sd2i <- apply(anymhscreen_no_ds1_vghrsweek, 2,
sd) #Calculate sd2i
anymhscreen_vghrsweek_n2i <- colSums(!
is.na(anymhscreen_no_ds1_vghrsweek)) #Calculate n2i
ds1anymhscreen_meta <- data.frame(m1i = anymhscreen_vghrsweek_m1i,
sd1i = anymhscreen_vghrsweek_sd1i, n1i = anymhscreen_vghrsweek_n1i,
m2i = anymhscreen_vghrsweek_m2i, sd2i = anymhscreen_vghrsweek_sd2i,
n2i = anymhscreen_vghrsweek_n2i) #MA dataframe
ds1anymhscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anymhscreen_meta)
#Calculate yi and vi

#Study 2
anymhscreen_yes_ds2_vghrsweek <- subset(anymhscreen_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
anymhscreen_vghrsweek_m1i <- apply(anymhscreen_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
anymhscreen_vghrsweek_sd1i <- apply(anymhscreen_yes_ds2_vghrsweek, 2,
sd) #Calculate sd1i
anymhscreen_vghrsweek_n1i <- colSums(!
is.na(anymhscreen_yes_ds2_vghrsweek)) #Calculate n1i
anymhscreen_no_ds2_vghrsweek <- subset(anymhscreen_no_ds2, select =
c(vghrsweek)) #Subset 2i data
anymhscreen_vghrsweek_m2i <- apply(anymhscreen_no_ds2_vghrsweek, 2,
mean) #Calculate m2i
anymhscreen_vghrsweek_sd2i <- apply(anymhscreen_no_ds2_vghrsweek, 2,
sd) #Calculate sd2i
anymhscreen_vghrsweek_n2i <- colSums(!
is.na(anymhscreen_no_ds2_vghrsweek)) #Calculate n2i
ds2anymhscreen_meta <- data.frame(m1i = anymhscreen_vghrsweek_m1i,
```

```
sd1i = anymhscreen_vghrsweek_sd1i, n1i = anymhscreen_vghrsweek_n1i,
m2i = anymhscreen_vghrsweek_m2i, sd2i = anymhscreen_vghrsweek_sd2i,
n2i = anymhscreen_vghrsweek_n2i) #MA dataframe
ds2anymhscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anymhscreen_meta)
#Calculate yi and vi

#FE meta-analysis
(anymhscreen_meta <- rbind(ds1anymhscreen_meta,
ds2anymhscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 15.14201 14.84014 169 10.62983 11.75826 181 4.5122 2.0670
## 2 20.84899 23.55195 298 15.75704 19.72033 284 5.0920 3.2307

(any_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anymhscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0634, p-val = 0.8011
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   4.7384   1.1227   4.2204   <.0001   2.5379   6.9389     ***
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
anymhscreen_yes_ds1_vgdaysweek <- subset(anymhscreen_yes_ds1, select
= c(vgdaysweek)) #Subset 1i data
anymhscreen_vgdaysweek_m1i <- apply(anymhscreen_yes_ds1_vgdaysweek,
2, mean) #Calculate m1i
anymhscreen_vgdaysweek_sd1i <-
apply(anymhscreen_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
anymhscreen_vgdaysweek_n1i <- colSums(!
is.na(anymhscreen_yes_ds1_vgdaysweek)) #Calculate n1i
anymhscreen_no_ds1_vgdaysweek <- subset(anymhscreen_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
anymhscreen_vgdaysweek_m2i <- apply(anymhscreen_no_ds1_vgdaysweek,
2, mean) #Calculate m2i
anymhscreen_vgdaysweek_sd2i <- apply(anymhscreen_no_ds1_vgdaysweek,
2, sd) #Calculate sd2i
anymhscreen_vgdaysweek_n2i <- colSums(!
```

```
is.na(anymhscreen_no_ds1_vgdaysweek)) #Calculate n2i
ds1anymhscreen_meta <- data.frame(m1i = anymhscreen_vgdaysweek_m1i,
sd1i = anymhscreen_vgdaysweek_sd1i, n1i = anymhscreen_vgdaysweek_n1i,
m2i = anymhscreen_vgdaysweek_m2i, sd2i =
anymhscreen_vgdaysweek_sd2i, n2i = anymhscreen_vgdaysweek_n2i) #MA
dataframe
ds1anymhscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anymhscreen_meta)
#Calculate yi and vi

#Study 2
anymhscreen_yes_ds2_vgdaysweek <- subset(anymhscreen_yes_ds2, select
= c(vgdaysweek)) #Subset 1i data
anymhscreen_vgdaysweek_m1i <- apply(anymhscreen_yes_ds2_vgdaysweek,
2, mean) #Calculate m1i
anymhscreen_vgdaysweek_sd1i <-
apply(anymhscreen_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
anymhscreen_vgdaysweek_n1i <- colSums(!
is.na(anymhscreen_yes_ds2_vgdaysweek)) #Calculate n1i
anymhscreen_no_ds2_vgdaysweek <- subset(anymhscreen_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
anymhscreen_vgdaysweek_m2i <- apply(anymhscreen_no_ds2_vgdaysweek,
2, mean) #Calculate m2i
anymhscreen_vgdaysweek_sd2i <- apply(anymhscreen_no_ds2_vgdaysweek,
2, sd) #Calculate sd2i
anymhscreen_vgdaysweek_n2i <- colSums(!
is.na(anymhscreen_no_ds2_vgdaysweek)) #Calculate n2i
ds2anymhscreen_meta <- data.frame(m1i = anymhscreen_vgdaysweek_m1i,
sd1i = anymhscreen_vgdaysweek_sd1i, n1i = anymhscreen_vgdaysweek_n1i,
m2i = anymhscreen_vgdaysweek_m2i, sd2i =
anymhscreen_vgdaysweek_sd2i, n2i = anymhscreen_vgdaysweek_n2i) #MA
dataframe
ds2anymhscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anymhscreen_meta)
#Calculate yi and vi

#FE meta-analysis
(anymhscreen_meta <- rbind(ds1anymhscreen_meta,
ds2anymhscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.307692 2.225395 169 4.767956 2.312111 181 0.5397 0.0588
## 2 4.889262 2.184538 298 4.549296 2.235523 284 0.3400 0.0336

(any_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anymhscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
```

```
## Q(df = 1) = 0.4317, p-val = 0.5112
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.4126   0.1463   2.8210   0.0048   0.1259   0.6993      **
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

PTSD screen

Replicated Effect

Hours per day

Study 1

```
(vghrsday_ptsd_ds1 <- t.test(vghrsday ~ ptsd, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by ptsd
## t = -2.252, df = 280.54, p-value = 0.02509
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.84264162 -0.05661409
## sample estimates:
## mean in group 0 mean in group 1
##       2.116162       2.565789
```

Study 2

```
(vghrsday_ptsd_ds2 <- t.test(vghrsday ~ ptsd, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by ptsd
## t = -2.9187, df = 394.62, p-value = 0.003717
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.4158620 -0.2761402
## sample estimates:
## mean in group 0 mean in group 1
##       3.211268       4.057269
```

Hours per week

Study 1

```
(vghrsweek_ptsd_ds1 <- t.test(vghrsweek ~ ptsd, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by ptsd
## t = -2.2043, df = 274.48, p-value = 0.02833
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -6.2545188 -0.3532696
## sample estimates:
## mean in group 0 mean in group 1
##        11.37374        14.67763
```

Study 2

```
(vghrsweek_ptsd_ds2 <- t.test(vghrsweek ~ ptsd, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by ptsd
## t = -3.5232, df = 376.41, p-value = 0.0004787
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -10.817470  -3.068092
## sample estimates:
## mean in group 0 mean in group 1
##        15.65634        22.59912
```

Days per week

Study 1

```
(vgdaysweek_ptsd_ds1 <- t.test(vgdaysweek ~ ptsd, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by ptsd
## t = -0.92919, df = 326.33, p-value = 0.3535
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.7125949  0.2553912
```

```
## sample estimates:
## mean in group 0 mean in group 1
##       4.929293       5.157895
```

Study 2

```
(vgdaysweek_ptsd_ds2 <- t.test(vgdaysweek ~ ptsd, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by ptsd
## t = -2.6387, df = 495.96, p-value = 0.008584
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.8542093 -0.1250549
## sample estimates:
## mean in group 0 mean in group 1
##       4.532394       5.022026
```

MD

Hours per day

```
#Study 1
ptsd_yes_ds1_vghrsday <- subset(ptsd_yes_ds1, select = c(vghrsday))
#Subset 1i data
ptsd_vghrsday_m1i <- apply(ptsd_yes_ds1_vghrsday, 2, mean) #Calculate
m1i
ptsd_vghrsday_sd1i <- apply(ptsd_yes_ds1_vghrsday, 2, sd) #Calculate sd1i
ptsd_vghrsday_n1i <- colSums(!is.na(ptsd_yes_ds1_vghrsday)) #Calculate
n1i
ptsd_no_ds1_vghrsday <- subset(ptsd_no_ds1, select = c(vghrsday)) #Subset
2i data
ptsd_vghrsday_m2i <- apply(ptsd_no_ds1_vghrsday, 2, mean) #Calculate
m2i
ptsd_vghrsday_sd2i <- apply(ptsd_no_ds1_vghrsday, 2, sd) #Calculate sd2i
ptsd_vghrsday_n2i <- colSums(!is.na(ptsd_no_ds1_vghrsday)) #Calculate n2i
ds1ptsd_meta <- data.frame(m1i = ptsd_vghrsday_m1i, sd1i =
ptsd_vghrsday_sd1i, n1i = ptsd_vghrsday_n1i, m2i = ptsd_vghrsday_m2i,
sd2i = ptsd_vghrsday_sd2i, n2i = ptsd_vghrsday_n2i) #MA dataframe
ds1ptsd_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsd_meta) #Calculate yi and vi

#Study 2
ptsd_yes_ds2_vghrsday <- subset(ptsd_yes_ds2, select = c(vghrsday))
#Subset 1i data
ptsd_vghrsday_m1i <- apply(ptsd_yes_ds2_vghrsday, 2, mean) #Calculate
```

```
m1i
ptsd_vghrsday_sd1i <- apply(ptsd_yes_ds2_vghrsday, 2, sd) #Calculate sd1i
ptsd_vghrsday_n1i <- colSums(!is.na(ptsd_yes_ds2_vghrsday)) #Calculate
n1i
ptsd_no_ds2_vghrsday <- subset(ptsd_no_ds2, select = c(vghrsday)) #Subset
2i data
ptsd_vghrsday_m2i <- apply(ptsd_no_ds2_vghrsday, 2, mean) #Calculate
m2i
ptsd_vghrsday_sd2i <- apply(ptsd_no_ds2_vghrsday, 2, sd) #Calculate sd2i
ptsd_vghrsday_n2i <- colSums(!is.na(ptsd_no_ds2_vghrsday)) #Calculate n2i
ds2ptsd_meta <- data.frame(m1i = ptsd_vghrsday_m1i, sd1i =
ptsd_vghrsday_sd1i, n1i = ptsd_vghrsday_n1i, m2i = ptsd_vghrsday_m2i,
sd2i = ptsd_vghrsday_sd2i, n2i = ptsd_vghrsday_n2i) #MA dataframe
ds2ptsd_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsd_meta) #Calculate yi and vi

#FE meta-analysis
(ptsd_meta <- rbind(ds1ptsd_meta, ds2ptsd_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 2.565789 2.025242 152 2.116162 1.596837 198 0.4496 0.0399
## 2 4.057269 3.715702 227 3.211268 2.869652 355 0.8460 0.0840

(any_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=ptsd_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 1.2683, p-val = 0.2601
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.5772   0.1644   3.5103   0.0004   0.2549   0.8994     ***
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
ptsd_yes_ds1_vghrsweek <- subset(ptsd_yes_ds1, select = c(vghrsweek))
#Subset 1i data
ptsd_vghrsweek_m1i <- apply(ptsd_yes_ds1_vghrsweek, 2, mean) #Calculate
m1i
ptsd_vghrsweek_sd1i <- apply(ptsd_yes_ds1_vghrsweek, 2, sd) #Calculate
sd1i
ptsd_vghrsweek_n1i <- colSums(!is.na(ptsd_yes_ds1_vghrsweek)) #Calculate
```

```
n1i
ptsd_no_ds1_vghrsweek <- subset(ptsd_no_ds1, select = c(vghrsweek))
#Subset 2i data
ptsd_vghrsweek_m2i <- apply(ptsd_no_ds1_vghrsweek, 2, mean) #Calculate
m2i
ptsd_vghrsweek_sd2i <- apply(ptsd_no_ds1_vghrsweek, 2, sd) #Calculate
sd2i
ptsd_vghrsweek_n2i <- colSums(!is.na(ptsd_no_ds1_vghrsweek)) #Calculate
n2i
ds1ptsd_meta <- data.frame(m1i = ptsd_vghrsweek_m1i, sd1i =
ptsd_vghrsweek_sd1i, n1i = ptsd_vghrsweek_n1i, m2i =
ptsd_vghrsweek_m2i, sd2i = ptsd_vghrsweek_sd2i, n2i =
ptsd_vghrsweek_n2i) #MA dataframe
ds1ptsd_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsd_meta) #Calculate yi and vi

#Study 2
ptsd_yes_ds2_vghrsweek <- subset(ptsd_yes_ds2, select = c(vghrsweek))
#Subset 1i data
ptsd_vghrsweek_m1i <- apply(ptsd_yes_ds2_vghrsweek, 2, mean) #Calculate
m1i
ptsd_vghrsweek_sd1i <- apply(ptsd_yes_ds2_vghrsweek, 2, sd) #Calculate
sd1i
ptsd_vghrsweek_n1i <- colSums(!is.na(ptsd_yes_ds2_vghrsweek)) #Calculate
n1i
ptsd_no_ds2_vghrsweek <- subset(ptsd_no_ds2, select = c(vghrsweek))
#Subset 2i data
ptsd_vghrsweek_m2i <- apply(ptsd_no_ds2_vghrsweek, 2, mean) #Calculate
m2i
ptsd_vghrsweek_sd2i <- apply(ptsd_no_ds2_vghrsweek, 2, sd) #Calculate
sd2i
ptsd_vghrsweek_n2i <- colSums(!is.na(ptsd_no_ds2_vghrsweek)) #Calculate
n2i
ds2ptsd_meta <- data.frame(m1i = ptsd_vghrsweek_m1i, sd1i =
ptsd_vghrsweek_sd1i, n1i = ptsd_vghrsweek_n1i, m2i =
ptsd_vghrsweek_m2i, sd2i = ptsd_vghrsweek_sd2i, n2i =
ptsd_vghrsweek_n2i) #MA dataframe
ds2ptsd_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsd_meta) #Calculate yi and vi

#FE meta-analysis
(ptsd_meta <- rbind(ds1ptsd_meta, ds2ptsd_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 14.67763 15.35393 152 11.37374 11.73488 198 3.3039 2.2464
## 2 22.59912 25.68276 227 15.65634 18.62703 355 6.9428 3.8831

(any_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=ptsd_meta))
```

```
##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.1603, p-val = 0.1416
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   4.6375   1.1930   3.8874   0.0001   2.2994   6.9757     ***
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
ptsd_yes_ds1_vgdaysweek <- subset(ptsd_yes_ds1, select = c(vgdaysweek))
#Subset 1i data
ptsd_vgdaysweek_m1i <- apply(ptsd_yes_ds1_vgdaysweek, 2, mean)
#Calculate m1i
ptsd_vgdaysweek_sd1i <- apply(ptsd_yes_ds1_vgdaysweek, 2, sd) #Calculate
sd1i
ptsd_vgdaysweek_n1i <- colSums(!is.na(ptsd_yes_ds1_vgdaysweek))
#Calculate n1i
ptsd_no_ds1_vgdaysweek <- subset(ptsd_no_ds1, select = c(vgdaysweek))
#Subset 2i data
ptsd_vgdaysweek_m2i <- apply(ptsd_no_ds1_vgdaysweek, 2, mean)
#Calculate m2i
ptsd_vgdaysweek_sd2i <- apply(ptsd_no_ds1_vgdaysweek, 2, sd) #Calculate
sd2i
ptsd_vgdaysweek_n2i <- colSums(!is.na(ptsd_no_ds1_vgdaysweek))
#Calculate n2i
ds1ptsd_meta <- data.frame(m1i = ptsd_vgdaysweek_m1i, sd1i =
ptsd_vgdaysweek_sd1i, n1i = ptsd_vgdaysweek_n1i, m2i =
ptsd_vgdaysweek_m2i, sd2i = ptsd_vgdaysweek_sd2i, n2i =
ptsd_vgdaysweek_n2i) #MA dataframe
ds1ptsd_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsd_meta) #Calculate yi and vi

#Study 2
ptsd_yes_ds2_vgdaysweek <- subset(ptsd_yes_ds2, select = c(vgdaysweek))
#Subset 1i data
ptsd_vgdaysweek_m1i <- apply(ptsd_yes_ds2_vgdaysweek, 2, mean)
#Calculate m1i
ptsd_vgdaysweek_sd1i <- apply(ptsd_yes_ds2_vgdaysweek, 2, sd) #Calculate
sd1i
ptsd_vgdaysweek_n1i <- colSums(!is.na(ptsd_yes_ds2_vgdaysweek))
#Calculate n1i
```

```
ptsd_no_ds2_vgdaysweek <- subset(ptsd_no_ds2, select = c(vgdaysweek))
#Subset 2i data
ptsd_vgdaysweek_m2i <- apply(ptsd_no_ds2_vgdaysweek, 2, mean)
#Calculate m2i
ptsd_vgdaysweek_sd2i <- apply(ptsd_no_ds2_vgdaysweek, 2, sd) #Calculate
sd2i
ptsd_vgdaysweek_n2i <- colSums(!is.na(ptsd_no_ds2_vgdaysweek))
#Calculate n2i
ds2ptsd_meta <- data.frame(m1i = ptsd_vgdaysweek_m1i, sd1i =
ptsd_vgdaysweek_sd1i, n1i = ptsd_vgdaysweek_n1i, m2i =
ptsd_vgdaysweek_m2i, sd2i = ptsd_vgdaysweek_sd2i, n2i =
ptsd_vgdaysweek_n2i) #MA dataframe
ds2ptsd_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsd_meta) #Calculate yi and vi

#FE meta-analysis
(ptsd_meta <- rbind(ds1ptsd_meta, ds2ptsd_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.157895 2.273094 152 4.929293 2.292130 198 0.2286 0.0605
## 2 5.022026 2.148152 227 4.532394 2.237569 355 0.4896 0.0344

(any_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=ptsd_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.7175, p-val = 0.3970
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.3950   0.1481   2.6662   0.0077   0.1046   0.6853     **
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Depression screen

Replicated Effect

Hours per day

Study 1

```
(vghrsday_depression_ds1 <- t.test(vghrsday ~ depression, data=ds1))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsday by depression
## t = -2.9955, df = 324.01, p-value = 0.002951
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.9548135 -0.1978231
## sample estimates:
## mean in group 0 mean in group 1
##        2.033149        2.609467
```

Study 2

```
(vghrsday_depression_ds2 <- t.test(vghrsday ~ depression, data=ds2))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsday by depression
## t = -2.496, df = 529.18, p-value = 0.01286
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.2133616 -0.1445957
## sample estimates:
## mean in group 0 mean in group 1
##        3.225080        3.904059
```

Hours per week

Study 1

```
(vghrsweek_depression_ds1 <- t.test(vghrsweek ~ depression, data=ds1))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsweek by depression
## t = -3.1385, df = 320.04, p-value = 0.001856
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -7.340716 -1.683639
## sample estimates:
## mean in group 0 mean in group 1
##        10.62983        15.14201
```

Study 2

```
(vghrsweek_depression_ds2 <- t.test(vghrsweek ~ depression, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by depression
## t = -2.8314, df = 512.1, p-value = 0.004818
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -8.811186 -1.592392
## sample estimates:
## mean in group 0 mean in group 1
##        15.94212        21.14391
```

Days per week

Study 1

```
(vgdaysweek_depression_ds1 <- t.test(vgdaysweek ~ depression, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by depression
## t = -2.2251, df = 347.68, p-value = 0.02672
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.01682148 -0.06265154
## sample estimates:
## mean in group 0 mean in group 1
##        4.767956        5.307692
```

Study 2

```
(vgdaysweek_depression_ds2 <- t.test(vgdaysweek ~ depression, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by depression
## t = -1.6935, df = 573.01, p-value = 0.0909
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.67065343  0.04961192
## sample estimates:
## mean in group 0 mean in group 1
##        4.578778        4.889299
```

MD

Hours per day

```
#Study 1
depression_yes_ds1_vghrsday <- subset(depression_yes_ds1, select =
c(vghrsday)) #Subset 1i data
depression_vghrsday_m1i <- apply(depression_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
depression_vghrsday_sd1i <- apply(depression_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
depression_vghrsday_n1i <- colSums(!is.na(depression_yes_ds1_vghrsday))
#Calculate n1i
depression_no_ds1_vghrsday <- subset(depression_no_ds1, select =
c(vghrsday)) #Subset 2i data
depression_vghrsday_m2i <- apply(depression_no_ds1_vghrsday, 2, mean)
#Calculate m2i
depression_vghrsday_sd2i <- apply(depression_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
depression_vghrsday_n2i <- colSums(!is.na(depression_no_ds1_vghrsday))
#Calculate n2i
ds1depression_meta <- data.frame(m1i = depression_vghrsday_m1i, sd1i =
depression_vghrsday_sd1i, n1i = depression_vghrsday_n1i, m2i =
depression_vghrsday_m2i, sd2i = depression_vghrsday_sd2i, n2i =
depression_vghrsday_n2i) #MA dataframe
ds1depression_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depression_meta)
#Calculate yi and vi

#Study 2
depression_yes_ds2_vghrsday <- subset(depression_yes_ds2, select =
c(vghrsday)) #Subset 1i data
depression_vghrsday_m1i <- apply(depression_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
depression_vghrsday_sd1i <- apply(depression_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
depression_vghrsday_n1i <- colSums(!is.na(depression_yes_ds2_vghrsday))
#Calculate n1i
depression_no_ds2_vghrsday <- subset(depression_no_ds2, select =
c(vghrsday)) #Subset 2i data
depression_vghrsday_m2i <- apply(depression_no_ds2_vghrsday, 2, mean)
#Calculate m2i
depression_vghrsday_sd2i <- apply(depression_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
depression_vghrsday_n2i <- colSums(!is.na(depression_no_ds2_vghrsday))
#Calculate n2i
ds2depression_meta <- data.frame(m1i = depression_vghrsday_m1i, sd1i =
depression_vghrsday_sd1i, n1i = depression_vghrsday_n1i, m2i =
depression_vghrsday_m2i, sd2i = depression_vghrsday_sd2i, n2i =
```

```
depression_vghrsday_n2i) #MA dataframe
ds2depression_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depression_meta)
#Calculate yi and vi

#FE meta-analysis
(depression_meta <- rbind(ds1depression_meta, ds2depression_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 2.609467 1.967330 169 2.033149 1.598265 181 0.5763 0.0370
## 2 3.904059 3.526359 271 3.225080 2.956810 311 0.6790 0.0740

(any_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=depression_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0949, p-val = 0.7580
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.6105   0.1571   3.8870   0.0001   0.3027   0.9184     ***
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
depression_yes_ds1_vghrsweek <- subset(depression_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
depression_vghrsweek_m1i <- apply(depression_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
depression_vghrsweek_sd1i <- apply(depression_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
depression_vghrsweek_n1i <- colSums(!
is.na(depression_yes_ds1_vghrsweek)) #Calculate n1i
depression_no_ds1_vghrsweek <- subset(depression_no_ds1, select =
c(vghrsweek)) #Subset 2i data
depression_vghrsweek_m2i <- apply(depression_no_ds1_vghrsweek, 2,
mean) #Calculate m2i
depression_vghrsweek_sd2i <- apply(depression_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
depression_vghrsweek_n2i <- colSums(!is.na(depression_no_ds1_vghrsweek))
#Calculate n2i
ds1depression_meta <- data.frame(m1i = depression_vghrsweek_m1i, sd1i =
depression_vghrsweek_sd1i, n1i = depression_vghrsweek_n1i, m2i =
```

```
depression_vghrsweek_m2i, sd2i = depression_vghrsweek_sd2i, n2i =
depression_vghrsweek_n2i) #MA dataframe
ds1depression_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depression_meta)
#Calculate yi and vi

#Study 2
depression_yes_ds2_vghrsweek <- subset(depression_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
depression_vghrsweek_m1i <- apply(depression_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
depression_vghrsweek_sd1i <- apply(depression_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
depression_vghrsweek_n1i <- colSums(!
is.na(depression_yes_ds2_vghrsweek)) #Calculate n1i
depression_no_ds2_vghrsweek <- subset(depression_no_ds2, select =
c(vghrsweek)) #Subset 2i data
depression_vghrsweek_m2i <- apply(depression_no_ds2_vghrsweek, 2,
mean) #Calculate m2i
depression_vghrsweek_sd2i <- apply(depression_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
depression_vghrsweek_n2i <- colSums(!is.na(depression_no_ds2_vghrsweek))
#Calculate n2i
ds2depression_meta <- data.frame(m1i = depression_vghrsweek_m1i, sd1i =
depression_vghrsweek_sd1i, n1i = depression_vghrsweek_n1i, m2i =
depression_vghrsweek_m2i, sd2i = depression_vghrsweek_sd2i, n2i =
depression_vghrsweek_n2i) #MA dataframe
ds2depression_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depression_meta)
#Calculate yi and vi

#FE meta-analysis
(depression_meta <- rbind(ds1depression_meta, ds2depression_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 15.14201 14.84014 169 10.62983 11.75826 181 4.5122 2.0670
## 2 21.14391 24.33024 271 15.94212 19.24569 311 5.2018 3.3753

(any_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=depression_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0874, p-val = 0.7675
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   4.7741   1.1322   4.2165   <.0001   2.5550   6.9932     ***
```

```
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
depression_yes_ds1_vgdaysweek <- subset(depression_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
depression_vgdaysweek_m1i <- apply(depression_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
depression_vgdaysweek_sd1i <- apply(depression_yes_ds1_vgdaysweek, 2,
sd) #Calculate sd1i
depression_vgdaysweek_n1i <- colSums(!
is.na(depression_yes_ds1_vgdaysweek)) #Calculate n1i
depression_no_ds1_vgdaysweek <- subset(depression_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
depression_vgdaysweek_m2i <- apply(depression_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
depression_vgdaysweek_sd2i <- apply(depression_no_ds1_vgdaysweek, 2,
sd) #Calculate sd2i
depression_vgdaysweek_n2i <- colSums(!
is.na(depression_no_ds1_vgdaysweek)) #Calculate n2i
ds1depression_meta <- data.frame(m1i = depression_vgdaysweek_m1i, sd1i
= depression_vgdaysweek_sd1i, n1i = depression_vgdaysweek_n1i, m2i =
depression_vgdaysweek_m2i, sd2i = depression_vgdaysweek_sd2i, n2i =
depression_vgdaysweek_n2i) #MA dataframe
ds1depression_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depression_meta)
#Calculate yi and vi

#Study 2
depression_yes_ds2_vgdaysweek <- subset(depression_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
depression_vgdaysweek_m1i <- apply(depression_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
depression_vgdaysweek_sd1i <- apply(depression_yes_ds2_vgdaysweek, 2,
sd) #Calculate sd1i
depression_vgdaysweek_n1i <- colSums(!
is.na(depression_yes_ds2_vgdaysweek)) #Calculate n1i
depression_no_ds2_vgdaysweek <- subset(depression_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
depression_vgdaysweek_m2i <- apply(depression_no_ds2_vgdaysweek, 2,
mean) #Calculate m2i
depression_vgdaysweek_sd2i <- apply(depression_no_ds2_vgdaysweek, 2,
sd) #Calculate sd2i
depression_vgdaysweek_n2i <- colSums(!
is.na(depression_no_ds2_vgdaysweek)) #Calculate n2i
ds2depression_meta <- data.frame(m1i = depression_vgdaysweek_m1i, sd1i
```

```
= depression_vgdaysweek_sd1i, n1i = depression_vgdaysweek_n1i, m2i =
depression_vgdaysweek_m2i, sd2i = depression_vgdaysweek_sd2i, n2i =
depression_vgdaysweek_n2i) #MA dataframe
ds2depression_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depression_meta)
#Calculate yi and vi

#FE meta-analysis
(depression_meta <- rbind(ds1depression_meta, ds2depression_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.307692 2.225395 169 4.767956 2.312111 181 0.5397 0.0588
## 2 4.889299 2.177902 271 4.578778 2.238822 311 0.3105 0.0336

(any_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=depression_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.5683, p-val = 0.4510
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.3939   0.1463   2.6927   0.0071   0.1072   0.6806      **
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Any SUD screen

Replicated Effect

Hours per day

Study 1

```
(vghrsday_anysudscreen_ds1 <- t.test(vghrsday ~ anysudscreen, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anysudscreen
## t = 1.4664, df = 288.13, p-value = 0.1436
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
```

```
##  -0.09918005  0.67875421
## sample estimates:
## mean in group 0 mean in group 1
##       2.466258       2.176471
```

Study 2

```
(vghrsday_anysudscreen_ds2 <- t.test(vghrsday ~ anysudscreen, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anysudscreen
## t = -0.39796, df = 522.95, p-value = 0.6908
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6467302  0.4288460
## sample estimates:
## mean in group 0 mean in group 1
##       3.490323       3.599265
```

Hours per week

Study 1

```
(vghrsweek_anysudscreen_ds1 <- t.test(vghrsweek ~ anysudscreen,
data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anysudscreen
## t = 1.1582, df = 288.12, p-value = 0.2477
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.198254  4.624717
## sample estimates:
## mean in group 0 mean in group 1
##       13.72393       12.01070
```

Study 2

```
(vghrsweek_anysudscreen_ds2 <- t.test(vghrsweek ~ anysudscreen,
data=ds2))

##
##  Welch Two Sample t-test
##
```

```
## data:  vghrsweek by anysudscreen
## t = -0.23956, df = 530.76, p-value = 0.8108
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -4.059154  3.176754
## sample estimates:
## mean in group 0 mean in group 1
##        18.15806        18.59926
```

Days per week

Study 1

```
(vgdaysweek_anysudscreen_ds1 <- t.test(vgdaysweek ~ anysudscreen,
data=ds1))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anysudscreen
## t = -0.73081, df = 333.82, p-value = 0.4654
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6637049  0.3041366
## sample estimates:
## mean in group 0 mean in group 1
##        4.932515        5.112299
```

Study 2

```
(vgdaysweek_anysudscreen_ds2 <- t.test(vgdaysweek ~ anysudscreen,
data=ds2))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anysudscreen
## t = -0.0091488, df = 570.67, p-value = 0.9927
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.3632316  0.3598635
## sample estimates:
## mean in group 0 mean in group 1
##        4.722581        4.724265
```

MD

Hours per day

```
#Study 1
anysudscreen_yes_ds1_vghrsday <- subset(anysudscreen_yes_ds1, select =
c(vghrsday)) #Subset 1i data
anysudscreen_vghrsday_m1i <- apply(anysudscreen_yes_ds1_vghrsday, 2,
mean) #Calculate m1i
anysudscreen_vghrsday_sd1i <- apply(anysudscreen_yes_ds1_vghrsday, 2,
sd) #Calculate sd1i
anysudscreen_vghrsday_n1i <- colSums(!
is.na(anysudscreen_yes_ds1_vghrsday)) #Calculate n1i
anysudscreen_no_ds1_vghrsday <- subset(anysudscreen_no_ds1, select =
c(vghrsday)) #Subset 2i data
anysudscreen_vghrsday_m2i <- apply(anysudscreen_no_ds1_vghrsday, 2,
mean) #Calculate m2i
anysudscreen_vghrsday_sd2i <- apply(anysudscreen_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
anysudscreen_vghrsday_n2i <- colSums(!
is.na(anysudscreen_no_ds1_vghrsday)) #Calculate n2i
ds1anysudscreen_meta <- data.frame(m1i = anysudscreen_vghrsday_m1i,
sd1i = anysudscreen_vghrsday_sd1i, n1i = anysudscreen_vghrsday_n1i, m2i
= anysudscreen_vghrsday_m2i, sd2i = anysudscreen_vghrsday_sd2i, n2i =
anysudscreen_vghrsday_n2i) #MA dataframe
ds1anysudscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anysudscreen_meta)
#Calculate yi and vi

#Study 2
anysudscreen_yes_ds2_vghrsday <- subset(anysudscreen_yes_ds2, select =
c(vghrsday)) #Subset 1i data
anysudscreen_vghrsday_m1i <- apply(anysudscreen_yes_ds2_vghrsday, 2,
mean) #Calculate m1i
anysudscreen_vghrsday_sd1i <- apply(anysudscreen_yes_ds2_vghrsday, 2,
sd) #Calculate sd1i
anysudscreen_vghrsday_n1i <- colSums(!
is.na(anysudscreen_yes_ds2_vghrsday)) #Calculate n1i
anysudscreen_no_ds2_vghrsday <- subset(anysudscreen_no_ds2, select =
c(vghrsday)) #Subset 2i data
anysudscreen_vghrsday_m2i <- apply(anysudscreen_no_ds2_vghrsday, 2,
mean) #Calculate m2i
anysudscreen_vghrsday_sd2i <- apply(anysudscreen_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
anysudscreen_vghrsday_n2i <- colSums(!
is.na(anysudscreen_no_ds2_vghrsday)) #Calculate n2i
ds2anysudscreen_meta <- data.frame(m1i = anysudscreen_vghrsday_m1i,
sd1i = anysudscreen_vghrsday_sd1i, n1i = anysudscreen_vghrsday_n1i, m2i
= anysudscreen_vghrsday_m2i, sd2i = anysudscreen_vghrsday_sd2i, n2i =
anysudscreen_vghrsday_n2i) #MA dataframe
```

```
ds2anysudscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anysudscreen_meta)
#Calculate yi and vi

#FE meta-analysis
(anysudscreen_meta <- rbind(ds1anysudscreen_meta,
ds2anysudscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.176471 1.497626 187 2.466258 2.100212 163 -0.2898 0.0391
## 2 3.599265 3.589303 272 3.490323 2.923773 310  0.1089 0.0749

(any_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anysudscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 1.3947, p-val = 0.2376
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.1532   0.1602  -0.9560   0.3391  -0.4672   0.1609
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Hours per week

```
#Study 1
anysudscreen_yes_ds1_vghrsweek <- subset(anysudscreen_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
anysudscreen_vghrsweek_m1i <- apply(anysudscreen_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
anysudscreen_vghrsweek_sd1i <- apply(anysudscreen_yes_ds1_vghrsweek,
2, sd) #Calculate sd1i
anysudscreen_vghrsweek_n1i <- colSums(!
is.na(anysudscreen_yes_ds1_vghrsweek)) #Calculate n1i
anysudscreen_no_ds1_vghrsweek <- subset(anysudscreen_no_ds1, select =
c(vghrsweek)) #Subset 2i data
anysudscreen_vghrsweek_m2i <- apply(anysudscreen_no_ds1_vghrsweek, 2,
mean) #Calculate m2i
anysudscreen_vghrsweek_sd2i <- apply(anysudscreen_no_ds1_vghrsweek, 2,
sd) #Calculate sd2i
anysudscreen_vghrsweek_n2i <- colSums(!
is.na(anysudscreen_no_ds1_vghrsweek)) #Calculate n2i
ds1anysudscreen_meta <- data.frame(m1i = anysudscreen_vghrsweek_m1i,
sd1i = anysudscreen_vghrsweek_sd1i, n1i = anysudscreen_vghrsweek_n1i,
```

```
m2i = anysudscreen_vghrsweek_m2i, sd2i = anysudscreen_vghrsweek_sd2i,
n2i = anysudscreen_vghrsweek_n2i) #MA dataframe
ds1anysudscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anysudscreen_meta)
#Calculate yi and vi

#Study 2
anysudscreen_yes_ds2_vghrsweek <- subset(anysudscreen_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
anysudscreen_vghrsweek_m1i <- apply(anysudscreen_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
anysudscreen_vghrsweek_sd1i <- apply(anysudscreen_yes_ds2_vghrsweek,
2, sd) #Calculate sd1i
anysudscreen_vghrsweek_n1i <- colSums(!
is.na(anysudscreen_yes_ds2_vghrsweek)) #Calculate n1i
anysudscreen_no_ds2_vghrsweek <- subset(anysudscreen_no_ds2, select =
c(vghrsweek)) #Subset 2i data
anysudscreen_vghrsweek_m2i <- apply(anysudscreen_no_ds2_vghrsweek, 2,
mean) #Calculate m2i
anysudscreen_vghrsweek_sd2i <- apply(anysudscreen_no_ds2_vghrsweek, 2,
sd) #Calculate sd2i
anysudscreen_vghrsweek_n2i <- colSums(!
is.na(anysudscreen_no_ds2_vghrsweek)) #Calculate n2i
ds2anysudscreen_meta <- data.frame(m1i = anysudscreen_vghrsweek_m1i,
sd1i = anysudscreen_vghrsweek_sd1i, n1i = anysudscreen_vghrsweek_n1i,
m2i = anysudscreen_vghrsweek_m2i, sd2i = anysudscreen_vghrsweek_sd2i,
n2i = anysudscreen_vghrsweek_n2i) #MA dataframe
ds2anysudscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anysudscreen_meta)
#Calculate yi and vi

#FE meta-analysis
(anysudscreen_meta <- rbind(ds1anysudscreen_meta,
ds2anysudscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 12.01070 11.20963 187 13.72393 15.72067 163 -1.7132 2.1881
## 2 18.59926 23.90150 272 18.15806 20.01013 310  0.4412 3.3919

(any_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anysudscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.8318, p-val = 0.3617
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
```

```
##  -0.8684   1.1533  -0.7530   0.4515  -3.1288   1.3920
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
anysudscreen_yes_ds1_vgdaysweek <- subset(anysudscreen_yes_ds1, select
= c(vgdaysweek)) #Subset 1i data
anysudscreen_vgdaysweek_m1i <-
apply(anysudscreen_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
anysudscreen_vgdaysweek_sd1i <-
apply(anysudscreen_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
anysudscreen_vgdaysweek_n1i <- colSums(!
is.na(anysudscreen_yes_ds1_vgdaysweek)) #Calculate n1i
anysudscreen_no_ds1_vgdaysweek <- subset(anysudscreen_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
anysudscreen_vgdaysweek_m2i <- apply(anysudscreen_no_ds1_vgdaysweek,
2, mean) #Calculate m2i
anysudscreen_vgdaysweek_sd2i <- apply(anysudscreen_no_ds1_vgdaysweek,
2, sd) #Calculate sd2i
anysudscreen_vgdaysweek_n2i <- colSums(!
is.na(anysudscreen_no_ds1_vgdaysweek)) #Calculate n2i
ds1anysudscreen_meta <- data.frame(m1i =
anysudscreen_vgdaysweek_m1i, sd1i = anysudscreen_vgdaysweek_sd1i, n1i
= anysudscreen_vgdaysweek_n1i, m2i = anysudscreen_vgdaysweek_m2i,
sd2i = anysudscreen_vgdaysweek_sd2i, n2i =
anysudscreen_vgdaysweek_n2i) #MA dataframe
ds1anysudscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anysudscreen_meta)
#Calculate yi and vi

#Study 2
anysudscreen_yes_ds2_vgdaysweek <- subset(anysudscreen_yes_ds2, select
= c(vgdaysweek)) #Subset 1i data
anysudscreen_vgdaysweek_m1i <-
apply(anysudscreen_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
anysudscreen_vgdaysweek_sd1i <-
apply(anysudscreen_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
anysudscreen_vgdaysweek_n1i <- colSums(!
is.na(anysudscreen_yes_ds2_vgdaysweek)) #Calculate n1i
anysudscreen_no_ds2_vgdaysweek <- subset(anysudscreen_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
anysudscreen_vgdaysweek_m2i <- apply(anysudscreen_no_ds2_vgdaysweek,
2, mean) #Calculate m2i
anysudscreen_vgdaysweek_sd2i <- apply(anysudscreen_no_ds2_vgdaysweek,
2, sd) #Calculate sd2i
anysudscreen_vgdaysweek_n2i <- colSums(!
```

```
is.na(anysudscreen_no_ds2_vgdaysweek)) #Calculate n2i
ds2anysudscreen_meta <- data.frame(m1i =
anysudscreen_vgdaysweek_m1i, sd1i = anysudscreen_vgdaysweek_sd1i, n1i
= anysudscreen_vgdaysweek_n1i, m2i = anysudscreen_vgdaysweek_m2i,
sd2i = anysudscreen_vgdaysweek_sd2i, n2i =
anysudscreen_vgdaysweek_n2i) #MA dataframe
ds2anysudscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anysudscreen_meta)
#Calculate yi and vi

#FE meta-analysis
(anysudscreen_meta <- rbind(ds1anysudscreen_meta,
ds2anysudscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.112299 2.210242 187 4.932515 2.367811 163 0.1798 0.0605
## 2 4.724265 2.212277 272 4.722581 2.219465 310 0.0017 0.0339

(any_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=anysudscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.3360, p-val = 0.5621
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0656   0.1474   0.4452   0.6562  -0.2233   0.3545
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

AUD screen

Replicated Effect

Hours per day

Study 1

```
(vghrsday_audit_ds1 <- t.test(vghrsday ~ audit, data=ds1))

##
##  Welch Two Sample t-test
##
```

```
## data:  vghrsday by audit
## t = 0.43577, df = 347.95, p-value = 0.6633
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.2875118  0.4511779
## sample estimates:
## mean in group 0 mean in group 1
##        2.346734        2.264901
```

Study 2

```
(vghrsday_audit_ds2 <- t.test(vghrsday ~ audit, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by audit
## t = 0.61131, df = 319.39, p-value = 0.5414
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4032843  0.7668746
## sample estimates:
## mean in group 0 mean in group 1
##        3.595588        3.413793
```

Hours per week

Study 1

```
(vghrsweek_audit_ds1 <- t.test(vghrsweek ~ audit, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by audit
## t = 0.03389, df = 348, p-value = 0.973
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.719887  2.815264
## sample estimates:
## mean in group 0 mean in group 1
##        12.82915        12.78146
```

Study 2

```
(vghrsweek_audit_ds2 <- t.test(vghrsweek ~ audit, data=ds2))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsweek by audit
## t = 0.51384, df = 320.73, p-value = 0.6077
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.907697  4.963478
## sample estimates:
## mean in group 0 mean in group 1
##        18.67157        17.64368
```

Days per week

Study 1

```
(vgdaysweek_audit_ds1 <- t.test(vgdaysweek ~ audit, data=ds1))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by audit
## t = -1.3703, df = 333.43, p-value = 0.1715
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.8137514  0.1455096
## sample estimates:
## mean in group 0 mean in group 1
##        4.884422        5.218543
```

Study 2

```
(vgdaysweek_audit_ds2 <- t.test(vgdaysweek ~ audit, data=ds2))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by audit
## t = -0.58516, df = 336.54, p-value = 0.5588
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5053819  0.2736375
## sample estimates:
## mean in group 0 mean in group 1
##        4.688725        4.804598
```

MD

Hours per day

```
#Study 1
audit_yes_ds1_vghrsday <- subset(audit_yes_ds1, select = c(vghrsday))
#Subset 1i data
audit_vghrsday_m1i <- apply(audit_yes_ds1_vghrsday, 2, mean) #Calculate
m1i
audit_vghrsday_sd1i <- apply(audit_yes_ds1_vghrsday, 2, sd) #Calculate sd1i
audit_vghrsday_n1i <- colSums(!is.na(audit_yes_ds1_vghrsday)) #Calculate
n1i
audit_no_ds1_vghrsday <- subset(audit_no_ds1, select = c(vghrsday))
#Subset 2i data
audit_vghrsday_m2i <- apply(audit_no_ds1_vghrsday, 2, mean) #Calculate
m2i
audit_vghrsday_sd2i <- apply(audit_no_ds1_vghrsday, 2, sd) #Calculate sd2i
audit_vghrsday_n2i <- colSums(!is.na(audit_no_ds1_vghrsday)) #Calculate
n2i
ds1audit_meta <- data.frame(m1i = audit_vghrsday_m1i, sd1i =
audit_vghrsday_sd1i, n1i = audit_vghrsday_n1i, m2i = audit_vghrsday_m2i,
sd2i = audit_vghrsday_sd2i, n2i = audit_vghrsday_n2i) #MA dataframe
ds1audit_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1audit_meta) #Calculate yi and vi

#Study 2
audit_yes_ds2_vghrsday <- subset(audit_yes_ds2, select = c(vghrsday))
#Subset 1i data
audit_vghrsday_m1i <- apply(audit_yes_ds2_vghrsday, 2, mean) #Calculate
m1i
audit_vghrsday_sd1i <- apply(audit_yes_ds2_vghrsday, 2, sd) #Calculate sd1i
audit_vghrsday_n1i <- colSums(!is.na(audit_yes_ds2_vghrsday)) #Calculate
n1i
audit_no_ds2_vghrsday <- subset(audit_no_ds2, select = c(vghrsday))
#Subset 2i data
audit_vghrsday_m2i <- apply(audit_no_ds2_vghrsday, 2, mean) #Calculate
m2i
audit_vghrsday_sd2i <- apply(audit_no_ds2_vghrsday, 2, sd) #Calculate sd2i
audit_vghrsday_n2i <- colSums(!is.na(audit_no_ds2_vghrsday)) #Calculate
n2i
ds2audit_meta <- data.frame(m1i = audit_vghrsday_m1i, sd1i =
audit_vghrsday_sd1i, n1i = audit_vghrsday_n1i, m2i = audit_vghrsday_m2i,
sd2i = audit_vghrsday_sd2i, n2i = audit_vghrsday_n2i) #MA dataframe
ds2audit_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2audit_meta) #Calculate yi and vi

#FE meta-analysis
(audit_meta <- rbind(ds1audit_meta, ds2audit_meta))
```

```
##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.264901 1.504225 151 2.346734 2.008914 199 -0.0818 0.0353
## 2 3.413793 3.308953 174 3.595588 3.226225 408 -0.1818 0.0884

(any_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=audit_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0808, p-val = 0.7762
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.1103   0.1588  -0.6949   0.4871  -0.4215   0.2009
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
audit_yes_ds1_vghrsweek <- subset(audit_yes_ds1, select = c(vghrsweek))
#Subset 1i data
audit_vghrsweek_m1i <- apply(audit_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
audit_vghrsweek_sd1i <- apply(audit_yes_ds1_vghrsweek, 2, sd) #Calculate
sd1i
audit_vghrsweek_n1i <- colSums(!is.na(audit_yes_ds1_vghrsweek))
#Calculate n1i
audit_no_ds1_vghrsweek <- subset(audit_no_ds1, select = c(vghrsweek))
#Subset 2i data
audit_vghrsweek_m2i <- apply(audit_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
audit_vghrsweek_sd2i <- apply(audit_no_ds1_vghrsweek, 2, sd) #Calculate
sd2i
audit_vghrsweek_n2i <- colSums(!is.na(audit_no_ds1_vghrsweek))
#Calculate n2i
ds1audit_meta <- data.frame(m1i = audit_vghrsweek_m1i, sd1i =
audit_vghrsweek_sd1i, n1i = audit_vghrsweek_n1i, m2i =
audit_vghrsweek_m2i, sd2i = audit_vghrsweek_sd2i, n2i =
audit_vghrsweek_n2i) #MA dataframe
ds1audit_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1audit_meta) #Calculate yi and vi

#Study 2
audit_yes_ds2_vghrsweek <- subset(audit_yes_ds2, select = c(vghrsweek))
```

```
#Subset 1i data
audit_vghrsweek_m1i <- apply(audit_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
audit_vghrsweek_sd1i <- apply(audit_yes_ds2_vghrsweek, 2, sd) #Calculate
sd1i
audit_vghrsweek_n1i <- colSums(!is.na(audit_yes_ds2_vghrsweek))
#Calculate n1i
audit_no_ds2_vghrsweek <- subset(audit_no_ds2, select = c(vghrsweek))
#Subset 2i data
audit_vghrsweek_m2i <- apply(audit_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
audit_vghrsweek_sd2i <- apply(audit_no_ds2_vghrsweek, 2, sd) #Calculate
sd2i
audit_vghrsweek_n2i <- colSums(!is.na(audit_no_ds2_vghrsweek))
#Calculate n2i
ds2audit_meta <- data.frame(m1i = audit_vghrsweek_m1i, sd1i =
audit_vghrsweek_sd1i, n1i = audit_vghrsweek_n1i, m2i =
audit_vghrsweek_m2i, sd2i = audit_vghrsweek_sd2i, n2i =
audit_vghrsweek_n2i) #MA dataframe
ds2audit_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2audit_meta) #Calculate yi and vi

#FE meta-analysis
(audit_meta <- rbind(ds1audit_meta, ds2audit_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 12.78146 11.37476 151 12.82915 14.95046 199 -0.0477 1.9801
## 2 17.64368 22.22818 174 18.67157 21.77414 408 -1.0279 4.0017

(any_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=audit_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.1606, p-val = 0.6886
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.3722   1.1509  -0.3234   0.7464  -2.6279   1.8836
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
audit_yes_ds1_vgdaysweek <- subset(audit_yes_ds1, select =
```

```
c(vgdaysweek)) #Subset 1i data
audit_vgdaysweek_m1i <- apply(audit_yes_ds1_vgdaysweek, 2, mean)
#Calculate m1i
audit_vgdaysweek_sd1i <- apply(audit_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
audit_vgdaysweek_n1i <- colSums(!is.na(audit_yes_ds1_vgdaysweek))
#Calculate n1i
audit_no_ds1_vgdaysweek <- subset(audit_no_ds1, select = c(vgdaysweek))
#Subset 2i data
audit_vgdaysweek_m2i <- apply(audit_no_ds1_vgdaysweek, 2, mean)
#Calculate m2i
audit_vgdaysweek_sd2i <- apply(audit_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
audit_vgdaysweek_n2i <- colSums(!is.na(audit_no_ds1_vgdaysweek))
#Calculate n2i
ds1audit_meta <- data.frame(m1i = audit_vgdaysweek_m1i, sd1i =
audit_vgdaysweek_sd1i, n1i = audit_vgdaysweek_n1i, m2i =
audit_vgdaysweek_m2i, sd2i = audit_vgdaysweek_sd2i, n2i =
audit_vgdaysweek_n2i) #MA dataframe
ds1audit_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1audit_meta) #Calculate yi and vi

#Study 2
audit_yes_ds2_vgdaysweek <- subset(audit_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
audit_vgdaysweek_m1i <- apply(audit_yes_ds2_vgdaysweek, 2, mean)
#Calculate m1i
audit_vgdaysweek_sd1i <- apply(audit_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
audit_vgdaysweek_n1i <- colSums(!is.na(audit_yes_ds2_vgdaysweek))
#Calculate n1i
audit_no_ds2_vgdaysweek <- subset(audit_no_ds2, select = c(vgdaysweek))
#Subset 2i data
audit_vgdaysweek_m2i <- apply(audit_no_ds2_vgdaysweek, 2, mean)
#Calculate m2i
audit_vgdaysweek_sd2i <- apply(audit_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
audit_vgdaysweek_n2i <- colSums(!is.na(audit_no_ds2_vgdaysweek))
#Calculate n2i
ds2audit_meta <- data.frame(m1i = audit_vgdaysweek_m1i, sd1i =
audit_vgdaysweek_sd1i, n1i = audit_vgdaysweek_n1i, m2i =
audit_vgdaysweek_m2i, sd2i = audit_vgdaysweek_sd2i, n2i =
audit_vgdaysweek_n2i) #MA dataframe
ds2audit_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2audit_meta) #Calculate yi and vi

#FE meta-analysis
(audit_meta <- rbind(ds1audit_meta, ds2audit_meta))
```

```
##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.218543 2.190568 151 4.884422 2.346652 199 0.3341 0.0595
## 2 4.804598 2.165623 174 4.688725 2.236325 408 0.1159 0.0392
```

```
(any_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=audit_meta))
```

```
##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.4828, p-val = 0.4872
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2026   0.1537   1.3181   0.1875  -0.0987   0.5039
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Cannabis screen

Replicated Effect

Hours per day

Study 1

```
(vghrsday_canscreen_ds1 <- t.test(vghrsday ~ canscreen, data=ds1))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsday by canscreen
## t = 2.4308, df = 124.9, p-value = 0.01649
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.09212335 0.89950958
## sample estimates:
## mean in group 0 mean in group 1
##        2.403509        1.907692
```

Study 2

```
(vghrsday_canscreen_ds2 <- t.test(vghrsday ~ canscreen, data=ds2))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsday by canscreen
## t = -1.4971, df = 161.89, p-value = 0.1363
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.3548808  0.1863906
## sample estimates:
## mean in group 0 mean in group 1
##        3.415755        4.000000
```

Hours per week

Study 1

```
(vghrsweek_canscreen_ds1 <- t.test(vghrsweek ~ canscreen, data=ds1))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsweek by canscreen
## t = 1.9612, df = 127.83, p-value = 0.05204
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.02645986  5.94224934
## sample estimates:
## mean in group 0 mean in group 1
##        13.35789        10.40000
```

Study 2

```
(vghrsweek_canscreen_ds2 <- t.test(vghrsweek ~ canscreen, data=ds2))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsweek by canscreen
## t = -1.4103, df = 160.96, p-value = 0.1604
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -8.961668  1.494395
## sample estimates:
## mean in group 0 mean in group 1
##        17.56236        21.29600
```

Days per week

Study 1

```
(vgdaysweek_canscreen_ds1 <- t.test(vgdaysweek ~ canscreen, data=ds1))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by canscreen
## t = -0.25413, df = 97.61, p-value = 0.7999
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6895237  0.5329785
## sample estimates:
## mean in group 0 mean in group 1
##        5.014035        5.092308
```

Study 2

```
(vgdaysweek_canscreen_ds2 <- t.test(vgdaysweek ~ canscreen, data=ds2))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by canscreen
## t = -0.07094, df = 193.5, p-value = 0.9435
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4633574  0.4311824
## sample estimates:
## mean in group 0 mean in group 1
##        4.719912        4.736000
```

MD

Hours per day

```
#Study 1
canscreen_yes_ds1_vghrsday <- subset(canscreen_yes_ds1, select =
c(vghrsday)) #Subset 1i data
canscreen_vghrsday_m1i <- apply(canscreen_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
canscreen_vghrsday_sd1i <- apply(canscreen_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
canscreen_vghrsday_n1i <- colSums(!is.na(canscreen_yes_ds1_vghrsday))
#Calculate n1i
canscreen_no_ds1_vghrsday <- subset(canscreen_no_ds1, select =
c(vghrsday)) #Subset 2i data
```

```
canscreen_vghrsday_m2i <- apply(canscreen_no_ds1_vghrsday, 2, mean)
#Calculate m2i
canscreen_vghrsday_sd2i <- apply(canscreen_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
canscreen_vghrsday_n2i <- colSums(!is.na(canscreen_no_ds1_vghrsday))
#Calculate n2i
ds1canscreen_meta <- data.frame(m1i = canscreen_vghrsday_m1i, sd1i =
canscreen_vghrsday_sd1i, n1i = canscreen_vghrsday_n1i, m2i =
canscreen_vghrsday_m2i, sd2i = canscreen_vghrsday_sd2i, n2i =
canscreen_vghrsday_n2i) #MA dataframe
ds1canscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1canscreen_meta) #Calculate
yi and vi

#Study 2
canscreen_yes_ds2_vghrsday <- subset(canscreen_yes_ds2, select =
c(vghrsday)) #Subset 1i data
canscreen_vghrsday_m1i <- apply(canscreen_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
canscreen_vghrsday_sd1i <- apply(canscreen_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
canscreen_vghrsday_n1i <- colSums(!is.na(canscreen_yes_ds2_vghrsday))
#Calculate n1i
canscreen_no_ds2_vghrsday <- subset(canscreen_no_ds2, select =
c(vghrsday)) #Subset 2i data
canscreen_vghrsday_m2i <- apply(canscreen_no_ds2_vghrsday, 2, mean)
#Calculate m2i
canscreen_vghrsday_sd2i <- apply(canscreen_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
canscreen_vghrsday_n2i <- colSums(!is.na(canscreen_no_ds2_vghrsday))
#Calculate n2i
ds2canscreen_meta <- data.frame(m1i = canscreen_vghrsday_m1i, sd1i =
canscreen_vghrsday_sd1i, n1i = canscreen_vghrsday_n1i, m2i =
canscreen_vghrsday_m2i, sd2i = canscreen_vghrsday_sd2i, n2i =
canscreen_vghrsday_n2i) #MA dataframe
ds2canscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2canscreen_meta) #Calculate
yi and vi

#FE meta-analysis
(canscreen_meta <- rbind(ds1canscreen_meta, ds2canscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 1.907692 1.377533  65 2.403509 1.880774 285 -0.4958 0.0416
## 2 4.000000 4.075893 125 3.415755 2.976887 457  0.5842 0.1523

(any_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=canscreen_meta))

##
## Fixed-Effects Model (k = 2)
```

```
##
## Test for Heterogeneity:
## Q(df = 1) = 6.0162, p-val = 0.0142
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.2641   0.1808  -1.4608   0.1441  -0.6184   0.0902
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
canscreen_yes_ds1_vghrsweek <- subset(canscreen_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
canscreen_vghrsweek_m1i <- apply(canscreen_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
canscreen_vghrsweek_sd1i <- apply(canscreen_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
canscreen_vghrsweek_n1i <- colSums(!is.na(canscreen_yes_ds1_vghrsweek))
#Calculate n1i
canscreen_no_ds1_vghrsweek <- subset(canscreen_no_ds1, select =
c(vghrsweek)) #Subset 2i data
canscreen_vghrsweek_m2i <- apply(canscreen_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
canscreen_vghrsweek_sd2i <- apply(canscreen_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
canscreen_vghrsweek_n2i <- colSums(!is.na(canscreen_no_ds1_vghrsweek))
#Calculate n2i
ds1canscreen_meta <- data.frame(m1i = canscreen_vghrsweek_m1i, sd1i =
canscreen_vghrsweek_sd1i, n1i = canscreen_vghrsweek_n1i, m2i =
canscreen_vghrsweek_m2i, sd2i = canscreen_vghrsweek_sd2i, n2i =
canscreen_vghrsweek_n2i) #MA dataframe
ds1canscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1canscreen_meta) #Calculate
yi and vi

#Study 2
canscreen_yes_ds2_vghrsweek <- subset(canscreen_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
canscreen_vghrsweek_m1i <- apply(canscreen_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
canscreen_vghrsweek_sd1i <- apply(canscreen_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
canscreen_vghrsweek_n1i <- colSums(!is.na(canscreen_yes_ds2_vghrsweek))
#Calculate n1i
canscreen_no_ds2_vghrsweek <- subset(canscreen_no_ds2, select =
```

```
c(vghrsweek)) #Subset 2i data
canscreen_vghrsweek_m2i <- apply(canscreen_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
canscreen_vghrsweek_sd2i <- apply(canscreen_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
canscreen_vghrsweek_n2i <- colSums(!is.na(canscreen_no_ds2_vghrsweek))
#Calculate n2i
ds2canscreen_meta <- data.frame(m1i = canscreen_vghrsweek_m1i, sd1i =
canscreen_vghrsweek_sd1i, n1i = canscreen_vghrsweek_n1i, m2i =
canscreen_vghrsweek_m2i, sd2i = canscreen_vghrsweek_sd2i, n2i =
canscreen_vghrsweek_n2i) #MA dataframe
ds2canscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2canscreen_meta) #Calculate
yi and vi

#FE meta-analysis
(canscreen_meta <- rbind(ds1canscreen_meta, ds2canscreen_meta))

##      m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 10.400 10.11774  65 13.35789 14.12339 285 -2.9579 2.2748
## 2 21.296 27.69157 125 17.56236 19.98445 457  3.7336 7.0085

(any_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=canscreen_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 4.8234, p-val = 0.0281
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -1.3182   1.3105  -1.0059   0.3145  -3.8867   1.2503
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Days per week

```
#Study 1
canscreen_yes_ds1_vgdaysweek <- subset(canscreen_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
canscreen_vgdaysweek_m1i <- apply(canscreen_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
canscreen_vgdaysweek_sd1i <- apply(canscreen_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
canscreen_vgdaysweek_n1i <- colSums(!
is.na(canscreen_yes_ds1_vgdaysweek)) #Calculate n1i
```

```
canscreen_no_ds1_vgdaysweek <- subset(canscreen_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
canscreen_vgdaysweek_m2i <- apply(canscreen_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
canscreen_vgdaysweek_sd2i <- apply(canscreen_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
canscreen_vgdaysweek_n2i <- colSums(!
is.na(canscreen_no_ds1_vgdaysweek)) #Calculate n2i
ds1canscreen_meta <- data.frame(m1i = canscreen_vgdaysweek_m1i, sd1i =
canscreen_vgdaysweek_sd1i, n1i = canscreen_vgdaysweek_n1i, m2i =
canscreen_vgdaysweek_m2i, sd2i = canscreen_vgdaysweek_sd2i, n2i =
canscreen_vgdaysweek_n2i) #MA dataframe
ds1canscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1canscreen_meta) #Calculate
yi and vi

#Study 2
canscreen_yes_ds2_vgdaysweek <- subset(canscreen_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
canscreen_vgdaysweek_m1i <- apply(canscreen_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
canscreen_vgdaysweek_sd1i <- apply(canscreen_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
canscreen_vgdaysweek_n1i <- colSums(!
is.na(canscreen_yes_ds2_vgdaysweek)) #Calculate n1i
canscreen_no_ds2_vgdaysweek <- subset(canscreen_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
canscreen_vgdaysweek_m2i <- apply(canscreen_no_ds2_vgdaysweek, 2,
mean) #Calculate m2i
canscreen_vgdaysweek_sd2i <- apply(canscreen_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
canscreen_vgdaysweek_n2i <- colSums(!
is.na(canscreen_no_ds2_vgdaysweek)) #Calculate n2i
ds2canscreen_meta <- data.frame(m1i = canscreen_vgdaysweek_m1i, sd1i =
canscreen_vgdaysweek_sd1i, n1i = canscreen_vgdaysweek_n1i, m2i =
canscreen_vgdaysweek_m2i, sd2i = canscreen_vgdaysweek_sd2i, n2i =
canscreen_vgdaysweek_n2i) #MA dataframe
ds2canscreen_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2canscreen_meta) #Calculate
yi and vi

#FE meta-analysis
(canscreen_meta <- rbind(ds1canscreen_meta, ds2canscreen_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.092308 2.227127  65 5.014035 2.299681 285 0.0783 0.0949
## 2 4.736000 2.258118 125 4.719912 2.204535 457 0.0161 0.0514

(any_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=canscreen_meta))
```

```
##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0264, p-val = 0.8708
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0379   0.1826   0.2078   0.8354  -0.3200   0.3959
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Any care - Discharge

Replicated Effect

Hours per day

Study 1

```
(vghrsday_anycaredis_ds1 <- t.test(vghrsday ~ anydis, data=ds1anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anydis
## t = -0.53622, df = 246.36, p-value = 0.5923
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5451046  0.3118150
## sample estimates:
## mean in group 0 mean in group 1
##        2.311927        2.428571
```

'

Study 2

```
(vghrsday_anycaredis_ds2 <- t.test(vghrsday ~ anydis, data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anydis
## t = -2.1194, df = 383.45, p-value = 0.0347
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
```

```
##  -1.27870365 -0.04794729
## sample estimates:
## mean in group 0 mean in group 1
##       3.201258       3.864583
```

Hours per week

Study 1

```
(vghrsweek_anycaredis_ds1 <- t.test(vghrsweek ~ anydis,
data=ds1anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anydis
## t = -0.54127, df = 243.38, p-value = 0.5888
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -4.143338  2.357087
## sample estimates:
## mean in group 0 mean in group 1
##       12.89908       13.79221
```

Study 2

```
(vghrsweek_anycaredis_ds2 <- t.test(vghrsweek ~ anydis,
data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anydis
## t = -2.6404, df = 400.5, p-value = 0.008604
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -9.577712 -1.402503
## sample estimates:
## mean in group 0 mean in group 1
##       15.47170       20.96181
```

Days per week

Study 1

```
(vgdaysweek_anycaredis_ds1 <- t.test(vgdaysweek ~ anydis,
data=ds1anyscreen))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anydis
## t = -0.92016, df = 231.08, p-value = 0.3585
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.8074883  0.2933694
## sample estimates:
## mean in group 0 mean in group 1
##        5.009174        5.266234
```

Study 2

```
(vgdaysweek_anycaredis_ds2 <- t.test(vgdaysweek ~ anydis,
data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anydis
## t = -2.8132, df = 308.79, p-value = 0.005219
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.0511242 -0.1859041
## sample estimates:
## mean in group 0 mean in group 1
##        4.371069        4.989583
```

MD

Hours per day

```
#Study 1
anycaredis_yes_ds1_vghrsday <- subset(anycaredis_yes_ds1, select =
c(vghrsday)) #Subset 1i data
anycaredis_vghrsday_m1i <- apply(anycaredis_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
anycaredis_vghrsday_sd1i <- apply(anycaredis_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
anycaredis_vghrsday_n1i <- colSums(!is.na(anycaredis_yes_ds1_vghrsday))
#Calculate n1i
anycaredis_no_ds1_vghrsday <- subset(anycaredis_no_ds1, select =
c(vghrsday)) #Subset 2i data
anycaredis_vghrsday_m2i <- apply(anycaredis_no_ds1_vghrsday, 2, mean)
#Calculate m2i
anycaredis_vghrsday_sd2i <- apply(anycaredis_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
```

```r
anycaredis_vghrsday_n2i <- colSums(!is.na(anycaredis_no_ds1_vghrsday))
#Calculate n2i
ds1anycaredis_meta <- data.frame(m1i = anycaredis_vghrsday_m1i, sd1i =
anycaredis_vghrsday_sd1i, n1i = anycaredis_vghrsday_n1i, m2i =
anycaredis_vghrsday_m2i, sd2i = anycaredis_vghrsday_sd2i, n2i =
anycaredis_vghrsday_n2i) #MA dataframe
ds1anycaredis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycaredis_meta)
#Calculate yi and vi

#Study 2
anycaredis_yes_ds2_vghrsday <- subset(anycaredis_yes_ds2, select =
c(vghrsday)) #Subset 1i data
anycaredis_vghrsday_m1i <- apply(anycaredis_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
anycaredis_vghrsday_sd1i <- apply(anycaredis_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
anycaredis_vghrsday_n1i <- colSums(!is.na(anycaredis_yes_ds2_vghrsday))
#Calculate n1i
anycaredis_no_ds2_vghrsday <- subset(anycaredis_no_ds2, select =
c(vghrsday)) #Subset 2i data
anycaredis_vghrsday_m2i <- apply(anycaredis_no_ds2_vghrsday, 2, mean)
#Calculate m2i
anycaredis_vghrsday_sd2i <- apply(anycaredis_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
anycaredis_vghrsday_n2i <- colSums(!is.na(anycaredis_no_ds2_vghrsday))
#Calculate n2i
ds2anycaredis_meta <- data.frame(m1i = anycaredis_vghrsday_m1i, sd1i =
anycaredis_vghrsday_sd1i, n1i = anycaredis_vghrsday_n1i, m2i =
anycaredis_vghrsday_m2i, sd2i = anycaredis_vghrsday_sd2i, n2i =
anycaredis_vghrsday_n2i) #MA dataframe
ds2anycaredis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycaredis_meta)
#Calculate yi and vi

#FE meta-analysis
(anycaredis_meta <- rbind(ds1anycaredis_meta, ds2anycaredis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 2.428571 1.843048 154 2.311927 1.659413 109 0.1166 0.0473
## 2 3.864583 3.575818 288 3.201258 2.918253 159 0.6633 0.0980

(anycaredis_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anycaredis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.0571, p-val = 0.1515
##
```

```
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2947   0.1786   1.6499   0.0990  -0.0554   0.6448       .
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

.

Hours per week

```
#Study 1
anycaredis_yes_ds1_vghrsweek <- subset(anycaredis_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
anycaredis_vghrsweek_m1i <- apply(anycaredis_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
anycaredis_vghrsweek_sd1i <- apply(anycaredis_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
anycaredis_vghrsweek_n1i <- colSums(!
is.na(anycaredis_yes_ds1_vghrsweek)) #Calculate n1i
anycaredis_no_ds1_vghrsweek <- subset(anycaredis_no_ds1, select =
c(vghrsweek)) #Subset 2i data
anycaredis_vghrsweek_m2i <- apply(anycaredis_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
anycaredis_vghrsweek_sd2i <- apply(anycaredis_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
anycaredis_vghrsweek_n2i <- colSums(!is.na(anycaredis_no_ds1_vghrsweek))
#Calculate n2i
ds1anycaredis_meta <- data.frame(m1i = anycaredis_vghrsweek_m1i, sd1i =
anycaredis_vghrsweek_sd1i, n1i = anycaredis_vghrsweek_n1i, m2i =
anycaredis_vghrsweek_m2i, sd2i = anycaredis_vghrsweek_sd2i, n2i =
anycaredis_vghrsweek_n2i) #MA dataframe
ds1anycaredis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycaredis_meta)
#Calculate yi and vi

#Study 2
anycaredis_yes_ds2_vghrsweek <- subset(anycaredis_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
anycaredis_vghrsweek_m1i <- apply(anycaredis_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
anycaredis_vghrsweek_sd1i <- apply(anycaredis_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
anycaredis_vghrsweek_n1i <- colSums(!
is.na(anycaredis_yes_ds2_vghrsweek)) #Calculate n1i
anycaredis_no_ds2_vghrsweek <- subset(anycaredis_no_ds2, select =
c(vghrsweek)) #Subset 2i data
anycaredis_vghrsweek_m2i <- apply(anycaredis_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
anycaredis_vghrsweek_sd2i <- apply(anycaredis_no_ds2_vghrsweek, 2, sd)
```

```
#Calculate sd2i
anycaredis_vghrsweek_n2i <- colSums(!is.na(anycaredis_no_ds2_vghrsweek))
#Calculate n2i
ds2anycaredis_meta <- data.frame(m1i = anycaredis_vghrsweek_m1i, sd1i =
anycaredis_vghrsweek_sd1i, n1i = anycaredis_vghrsweek_n1i, m2i =
anycaredis_vghrsweek_m2i, sd2i = anycaredis_vghrsweek_sd2i, n2i =
anycaredis_vghrsweek_n2i) #MA dataframe
ds2anycaredis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycaredis_meta)
#Calculate yi and vi

#FE meta-analysis
(anycaredis_meta <- rbind(ds1anycaredis_meta, ds2anycaredis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 13.79221 13.79243 154 12.89908 12.73297 109 0.8931 2.7227
## 2 20.96181 24.58510 288 15.47170 18.80709 159 5.4901 4.3233

(anycaredis_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anycaredis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.9992, p-val = 0.0833
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   2.6695   1.2925   2.0653   0.0389   0.1362   5.2028      *
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
anycaredis_yes_ds1_vgdaysweek <- subset(anycaredis_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
anycaredis_vgdaysweek_m1i <- apply(anycaredis_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
anycaredis_vgdaysweek_sd1i <- apply(anycaredis_yes_ds1_vgdaysweek, 2,
sd) #Calculate sd1i
anycaredis_vgdaysweek_n1i <- colSums(!
is.na(anycaredis_yes_ds1_vgdaysweek)) #Calculate n1i
anycaredis_no_ds1_vgdaysweek <- subset(anycaredis_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
anycaredis_vgdaysweek_m2i <- apply(anycaredis_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
```

```r
anycaredis_vgdaysweek_sd2i <- apply(anycaredis_no_ds1_vgdaysweek, 2,
sd) #Calculate sd2i
anycaredis_vgdaysweek_n2i <- colSums(!
is.na(anycaredis_no_ds1_vgdaysweek)) #Calculate n2i
ds1anycaredis_meta <- data.frame(m1i = anycaredis_vgdaysweek_m1i, sd1i
= anycaredis_vgdaysweek_sd1i, n1i = anycaredis_vgdaysweek_n1i, m2i =
anycaredis_vgdaysweek_m2i, sd2i = anycaredis_vgdaysweek_sd2i, n2i =
anycaredis_vgdaysweek_n2i) #MA dataframe
ds1anycaredis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycaredis_meta)
#Calculate yi and vi

#Study 2
anycaredis_yes_ds2_vgdaysweek <- subset(anycaredis_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
anycaredis_vgdaysweek_m1i <- apply(anycaredis_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
anycaredis_vgdaysweek_sd1i <- apply(anycaredis_yes_ds2_vgdaysweek, 2,
sd) #Calculate sd1i
anycaredis_vgdaysweek_n1i <- colSums(!
is.na(anycaredis_yes_ds2_vgdaysweek)) #Calculate n1i
anycaredis_no_ds2_vgdaysweek <- subset(anycaredis_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
anycaredis_vgdaysweek_m2i <- apply(anycaredis_no_ds2_vgdaysweek, 2,
mean) #Calculate m2i
anycaredis_vgdaysweek_sd2i <- apply(anycaredis_no_ds2_vgdaysweek, 2,
sd) #Calculate sd2i
anycaredis_vgdaysweek_n2i <- colSums(!
is.na(anycaredis_no_ds2_vgdaysweek)) #Calculate n2i
ds2anycaredis_meta <- data.frame(m1i = anycaredis_vgdaysweek_m1i, sd1i
= anycaredis_vgdaysweek_sd1i, n1i = anycaredis_vgdaysweek_n1i, m2i =
anycaredis_vgdaysweek_m2i, sd2i = anycaredis_vgdaysweek_sd2i, n2i =
anycaredis_vgdaysweek_n2i) #MA dataframe
ds2anycaredis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycaredis_meta)
#Calculate yi and vi

#FE meta-analysis
(anycaredis_meta <- rbind(ds1anycaredis_meta, ds2anycaredis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.266234 2.217112 154 5.009174 2.242252 109 0.2571 0.0780
## 2 4.989583 2.133986 288 4.371069 2.274107 159 0.6185 0.0483

(anycaredis_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anycaredis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
```

```
## Q(df = 1) = 1.0338, p-val = 0.3093
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.4803   0.1728   2.7798   0.0054   0.1416   0.8189      **
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Any care - Year

Replicated Effect

Hours per day

Study 1

```
(vghrsday_anycareyear_ds1 <- t.test(vghrsday ~ anyyear,
data=ds1anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anyyear
## t = 0.82714, df = 220.22, p-value = 0.4091
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.2534314  0.6200125
## sample estimates:
## mean in group 0 mean in group 1
##        2.450617        2.267327
```

Study 2

```
(vghrsday_anycareyear_ds2 <- t.test(vghrsday ~ anyyear,
data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anyyear
## t = -1.6325, df = 404.16, p-value = 0.1034
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.1610420  0.1075661
## sample estimates:
```

```
## mean in group 0 mean in group 1
##       3.382353       3.909091
```

Hours per week

Study 1

```
(vghrsweek_anycareyear_ds1 <- t.test(vghrsweek ~ anyyear,
data=ds1anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anyyear
## t = 0.9737, df = 225.04, p-value = 0.3312
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.655933  4.890868
## sample estimates:
## mean in group 0 mean in group 1
##       14.04321       12.42574
```

Study 2

```
(vghrsweek_anycareyear_ds2 <- t.test(vghrsweek ~ anyyear,
data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anyyear
## t = -1.6053, df = 400.13, p-value = 0.1092
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -7.8192419  0.7895688
## sample estimates:
## mean in group 0 mean in group 1
##       17.36555       20.88038
```

Days per week

Study 1

```
(vgdaysweek_anycareyear_ds1 <- t.test(vgdaysweek ~ anyyear,
data=ds1anyscreen))

##
##  Welch Two Sample t-test
```

```
##
## data:  vgdaysweek by anyyear
## t = 0.12071, df = 210.66, p-value = 0.904
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5247097  0.5931610
## sample estimates:
## mean in group 0 mean in group 1
##        5.172840        5.138614
```

Study 2

```
(vgdaysweek_anycareyear_ds2 <- t.test(vgdaysweek ~ anyyear,
data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anyyear
## t = -1.2168, df = 442.3, p-value = 0.2243
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6617582  0.1556667
## sample estimates:
## mean in group 0 mean in group 1
##        4.651261        4.904306
```

MD

Hours per day

```
#Study 1
anycareyear_yes_ds1_vghrsday <- subset(anycareyear_yes_ds1, select =
c(vghrsday)) #Subset 1i data
anycareyear_vghrsday_m1i <- apply(anycareyear_yes_ds1_vghrsday, 2,
mean) #Calculate m1i
anycareyear_vghrsday_sd1i <- apply(anycareyear_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
anycareyear_vghrsday_n1i <- colSums(!
is.na(anycareyear_yes_ds1_vghrsday)) #Calculate n1i
anycareyear_no_ds1_vghrsday <- subset(anycareyear_no_ds1, select =
c(vghrsday)) #Subset 2i data
anycareyear_vghrsday_m2i <- apply(anycareyear_no_ds1_vghrsday, 2,
mean) #Calculate m2i
anycareyear_vghrsday_sd2i <- apply(anycareyear_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
anycareyear_vghrsday_n2i <- colSums(!is.na(anycareyear_no_ds1_vghrsday))
#Calculate n2i
```

```r
ds1anycareyear_meta <- data.frame(m1i = anycareyear_vghrsday_m1i, sd1i = anycareyear_vghrsday_sd1i, n1i = anycareyear_vghrsday_n1i, m2i = anycareyear_vghrsday_m2i, sd2i = anycareyear_vghrsday_sd2i, n2i = anycareyear_vghrsday_n2i) #MA dataframe
ds1anycareyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycareyear_meta)
#Calculate yi and vi

#Study 2
anycareyear_yes_ds2_vghrsday <- subset(anycareyear_yes_ds2, select = c(vghrsday)) #Subset 1i data
anycareyear_vghrsday_m1i <- apply(anycareyear_yes_ds2_vghrsday, 2, mean) #Calculate m1i
anycareyear_vghrsday_sd1i <- apply(anycareyear_yes_ds2_vghrsday, 2, sd) #Calculate sd1i
anycareyear_vghrsday_n1i <- colSums(!is.na(anycareyear_yes_ds2_vghrsday)) #Calculate n1i
anycareyear_no_ds2_vghrsday <- subset(anycareyear_no_ds2, select = c(vghrsday)) #Subset 2i data
anycareyear_vghrsday_m2i <- apply(anycareyear_no_ds2_vghrsday, 2, mean) #Calculate m2i
anycareyear_vghrsday_sd2i <- apply(anycareyear_no_ds2_vghrsday, 2, sd) #Calculate sd2i
anycareyear_vghrsday_n2i <- colSums(!is.na(anycareyear_no_ds2_vghrsday)) #Calculate n2i
ds2anycareyear_meta <- data.frame(m1i = anycareyear_vghrsday_m1i, sd1i = anycareyear_vghrsday_sd1i, n1i = anycareyear_vghrsday_n1i, m2i = anycareyear_vghrsday_m2i, sd2i = anycareyear_vghrsday_sd2i, n2i = anycareyear_vghrsday_n2i) #MA dataframe
ds2anycareyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycareyear_meta)
#Calculate yi and vi

#FE meta-analysis
(anycareyear_meta <- rbind(ds1anycareyear_meta, ds2anycareyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.267327 1.714008 101 2.450617 1.800802 162 -0.1833 0.0491
## 2 3.909091 3.690732 209 3.382353 3.044124 238  0.5267 0.1041

(anycareyear_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE", data=anycareyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 3.2904, p-val = 0.0697
##
## Model Results:
##
```

```
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0443   0.1827   0.2424   0.8085  -0.3137   0.4023
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
anycareyear_yes_ds1_vghrsweek <- subset(anycareyear_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
anycareyear_vghrsweek_m1i <- apply(anycareyear_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
anycareyear_vghrsweek_sd1i <- apply(anycareyear_yes_ds1_vghrsweek, 2,
sd) #Calculate sd1i
anycareyear_vghrsweek_n1i <- colSums(!
is.na(anycareyear_yes_ds1_vghrsweek)) #Calculate n1i
anycareyear_no_ds1_vghrsweek <- subset(anycareyear_no_ds1, select =
c(vghrsweek)) #Subset 2i data
anycareyear_vghrsweek_m2i <- apply(anycareyear_no_ds1_vghrsweek, 2,
mean) #Calculate m2i
anycareyear_vghrsweek_sd2i <- apply(anycareyear_no_ds1_vghrsweek, 2,
sd) #Calculate sd2i
anycareyear_vghrsweek_n2i <- colSums(!
is.na(anycareyear_no_ds1_vghrsweek)) #Calculate n2i
ds1anycareyear_meta <- data.frame(m1i = anycareyear_vghrsweek_m1i,
sd1i = anycareyear_vghrsweek_sd1i, n1i = anycareyear_vghrsweek_n1i, m2i
= anycareyear_vghrsweek_m2i, sd2i = anycareyear_vghrsweek_sd2i, n2i =
anycareyear_vghrsweek_n2i) #MA dataframe
ds1anycareyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycareyear_meta)
#Calculate yi and vi

#Study 2
anycareyear_yes_ds2_vghrsweek <- subset(anycareyear_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
anycareyear_vghrsweek_m1i <- apply(anycareyear_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
anycareyear_vghrsweek_sd1i <- apply(anycareyear_yes_ds2_vghrsweek, 2,
sd) #Calculate sd1i
anycareyear_vghrsweek_n1i <- colSums(!
is.na(anycareyear_yes_ds2_vghrsweek)) #Calculate n1i
anycareyear_no_ds2_vghrsweek <- subset(anycareyear_no_ds2, select =
c(vghrsweek)) #Subset 2i data
anycareyear_vghrsweek_m2i <- apply(anycareyear_no_ds2_vghrsweek, 2,
mean) #Calculate m2i
anycareyear_vghrsweek_sd2i <- apply(anycareyear_no_ds2_vghrsweek, 2,
sd) #Calculate sd2i
anycareyear_vghrsweek_n2i <- colSums(!
```

```
is.na(anycareyear_no_ds2_vghrsweek)) #Calculate n2i
ds2anycareyear_meta <- data.frame(m1i = anycareyear_vghrsweek_m1i,
sd1i = anycareyear_vghrsweek_sd1i, n1i = anycareyear_vghrsweek_n1i, m2i
= anycareyear_vghrsweek_m2i, sd2i = anycareyear_vghrsweek_sd2i, n2i =
anycareyear_vghrsweek_n2i) #MA dataframe
ds2anycareyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycareyear_meta)
#Calculate yi and vi

#FE meta-analysis
(anycareyear_meta <- rbind(ds1anycareyear_meta, ds2anycareyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 12.42574 12.68649 101 14.04321 13.74314 162 -1.6175 2.7594
## 2 20.88038 25.21351 209 17.36555 20.42163 238  3.5148 4.7940

(anycareyear_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anycareyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 3.4872, p-val = 0.0618
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2575   1.3234   0.1946   0.8457  -2.3363   2.8513
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
anycareyear_yes_ds1_vgdaysweek <- subset(anycareyear_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
anycareyear_vgdaysweek_m1i <- apply(anycareyear_yes_ds1_vgdaysweek,
2, mean) #Calculate m1i
anycareyear_vgdaysweek_sd1i <- apply(anycareyear_yes_ds1_vgdaysweek,
2, sd) #Calculate sd1i
anycareyear_vgdaysweek_n1i <- colSums(!
is.na(anycareyear_yes_ds1_vgdaysweek)) #Calculate n1i
anycareyear_no_ds1_vgdaysweek <- subset(anycareyear_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
anycareyear_vgdaysweek_m2i <- apply(anycareyear_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
anycareyear_vgdaysweek_sd2i <- apply(anycareyear_no_ds1_vgdaysweek, 2,
sd) #Calculate sd2i
```

```r
anycareyear_vgdaysweek_n2i <- colSums(!
is.na(anycareyear_no_ds1_vgdaysweek)) #Calculate n2i
ds1anycareyear_meta <- data.frame(m1i = anycareyear_vgdaysweek_m1i,
sd1i = anycareyear_vgdaysweek_sd1i, n1i = anycareyear_vgdaysweek_n1i,
m2i = anycareyear_vgdaysweek_m2i, sd2i = anycareyear_vgdaysweek_sd2i,
n2i = anycareyear_vgdaysweek_n2i) #MA dataframe
ds1anycareyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycareyear_meta)
#Calculate yi and vi

#Study 2
anycareyear_yes_ds2_vgdaysweek <- subset(anycareyear_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
anycareyear_vgdaysweek_m1i <- apply(anycareyear_yes_ds2_vgdaysweek,
2, mean) #Calculate m1i
anycareyear_vgdaysweek_sd1i <- apply(anycareyear_yes_ds2_vgdaysweek,
2, sd) #Calculate sd1i
anycareyear_vgdaysweek_n1i <- colSums(!
is.na(anycareyear_yes_ds2_vgdaysweek)) #Calculate n1i
anycareyear_no_ds2_vgdaysweek <- subset(anycareyear_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
anycareyear_vgdaysweek_m2i <- apply(anycareyear_no_ds2_vgdaysweek, 2,
mean) #Calculate m2i
anycareyear_vgdaysweek_sd2i <- apply(anycareyear_no_ds2_vgdaysweek, 2,
sd) #Calculate sd2i
anycareyear_vgdaysweek_n2i <- colSums(!
is.na(anycareyear_no_ds2_vgdaysweek)) #Calculate n2i
ds2anycareyear_meta <- data.frame(m1i = anycareyear_vgdaysweek_m1i,
sd1i = anycareyear_vgdaysweek_sd1i, n1i = anycareyear_vgdaysweek_n1i,
m2i = anycareyear_vgdaysweek_m2i, sd2i = anycareyear_vgdaysweek_sd2i,
n2i = anycareyear_vgdaysweek_n2i) #MA dataframe
ds2anycareyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycareyear_meta)
#Calculate yi and vi

#FE meta-analysis
(anycareyear_meta <- rbind(ds1anycareyear_meta, ds2anycareyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 5.138614 2.245127 101 5.172840 2.222360 162 -0.0342 0.0804
## 2 4.904306 2.139471 209 4.651261 2.253974 238  0.2530 0.0432

(anycareyear_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anycareyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.6675, p-val = 0.4139
##
```

```
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.1526   0.1677   0.9098   0.3629  -0.1761   0.4812
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

.

Any care - Month

Replicated Effect

Hours per day

Study 1

```
(vghrsday_anycaremonth_ds1 <- t.test(vghrsday ~ anymonth,
data=ds1anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anymonth
## t = -1.6981, df = 42.665, p-value = 0.09678
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.3598088  0.1167838
## sample estimates:
## mean in group 0 mean in group 1
##        2.295154        2.916667
```

.

Study 2

```
(vghrsday_anycaremonth_ds2 <- t.test(vghrsday ~ anymonth,
data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by anymonth
## t = 0.3906, df = 172.75, p-value = 0.6966
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5400568  0.8065367
## sample estimates:
## mean in group 0 mean in group 1
##        3.655462        3.522222
```

Hours per week

Study 1

```
(vghrsweek_anycaremonth_ds1 <- t.test(vghrsweek ~ anymonth,
data=ds1anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anymonth
## t = -1.25, df = 42.65, p-value = 0.2181
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -9.068652  2.129592
## sample estimates:
## mean in group 0 mean in group 1
##        12.94714        16.41667
```

Study 2

```
(vghrsweek_anycaremonth_ds2 <- t.test(vghrsweek ~ anymonth,
data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by anymonth
## t = 0.38076, df = 170.23, p-value = 0.7039
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -3.714307  5.489657
## sample estimates:
## mean in group 0 mean in group 1
##        19.18768        18.30000
```

Days per week

Study 1

```
(vgdaysweek_anycaremonth_ds1 <- t.test(vgdaysweek ~ anymonth,
data=ds1anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anymonth
## t = -0.25859, df = 46.433, p-value = 0.7971
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.9188367  0.7095856
## sample estimates:
## mean in group 0 mean in group 1
##       5.145374       5.250000
```

Study 2

```
(vgdaysweek_anycaremonth_ds2 <- t.test(vgdaysweek ~ anymonth,
data=ds2anyscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by anymonth
## t = -1.2864, df = 147.57, p-value = 0.2003
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.8023105  0.1696308
## sample estimates:
## mean in group 0 mean in group 1
##       4.705882       5.022222
```

MD

Hours per day

```
#Study 1
anycaremonth_yes_ds1_vghrsday <- subset(anycaremonth_yes_ds1, select =
c(vghrsday)) #Subset 1i data
anycaremonth_vghrsday_m1i <- apply(anycaremonth_yes_ds1_vghrsday, 2,
mean) #Calculate m1i
anycaremonth_vghrsday_sd1i <- apply(anycaremonth_yes_ds1_vghrsday, 2,
sd) #Calculate sd1i
anycaremonth_vghrsday_n1i <- colSums(!
is.na(anycaremonth_yes_ds1_vghrsday)) #Calculate n1i
anycaremonth_no_ds1_vghrsday <- subset(anycaremonth_no_ds1, select =
c(vghrsday)) #Subset 2i data
anycaremonth_vghrsday_m2i <- apply(anycaremonth_no_ds1_vghrsday, 2,
mean) #Calculate m2i
anycaremonth_vghrsday_sd2i <- apply(anycaremonth_no_ds1_vghrsday, 2,
sd) #Calculate sd2i
anycaremonth_vghrsday_n2i <- colSums(!
is.na(anycaremonth_no_ds1_vghrsday)) #Calculate n2i
ds1anycaremonth_meta <- data.frame(m1i = anycaremonth_vghrsday_m1i,
sd1i = anycaremonth_vghrsday_sd1i, n1i = anycaremonth_vghrsday_n1i, m2i
= anycaremonth_vghrsday_m2i, sd2i = anycaremonth_vghrsday_sd2i, n2i =
```

```
anycaremonth_vghrsday_n2i) #MA dataframe
ds1anycaremonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycaremonth_meta)
#Calculate yi and vi

#Study 2
anycaremonth_yes_ds2_vghrsday <- subset(anycaremonth_yes_ds2, select =
c(vghrsday)) #Subset 1i data
anycaremonth_vghrsday_m1i <- apply(anycaremonth_yes_ds2_vghrsday, 2,
mean) #Calculate m1i
anycaremonth_vghrsday_sd1i <- apply(anycaremonth_yes_ds2_vghrsday, 2,
sd) #Calculate sd1i
anycaremonth_vghrsday_n1i <- colSums(!
is.na(anycaremonth_yes_ds2_vghrsday)) #Calculate n1i
anycaremonth_no_ds2_vghrsday <- subset(anycaremonth_no_ds2, select =
c(vghrsday)) #Subset 2i data
anycaremonth_vghrsday_m2i <- apply(anycaremonth_no_ds2_vghrsday, 2,
mean) #Calculate m2i
anycaremonth_vghrsday_sd2i <- apply(anycaremonth_no_ds2_vghrsday, 2,
sd) #Calculate sd2i
anycaremonth_vghrsday_n2i <- colSums(!
is.na(anycaremonth_no_ds2_vghrsday)) #Calculate n2i
ds2anycaremonth_meta <- data.frame(m1i = anycaremonth_vghrsday_m1i,
sd1i = anycaremonth_vghrsday_sd1i, n1i = anycaremonth_vghrsday_n1i, m2i
= anycaremonth_vghrsday_m2i, sd2i = anycaremonth_vghrsday_sd2i, n2i =
anycaremonth_vghrsday_n2i) #MA dataframe
ds2anycaremonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycaremonth_meta)
#Calculate yi and vi

#FE meta-analysis
(anycaremonth_meta <- rbind(ds1anycaremonth_meta,
ds2anycaremonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.916667 2.089087  36 2.295154 1.700110 227  0.6215 0.1340
## 2 3.522222 2.711721  90 3.655462 3.517461 357 -0.1332 0.1164

(anycaremonth_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anycaremonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.2756, p-val = 0.1314
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2176   0.2495   0.8720   0.3832  -0.2715   0.7067
```

```
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
anycaremonth_yes_ds1_vghrsweek <- subset(anycaremonth_yes_ds1, select
= c(vghrsweek)) #Subset 1i data
anycaremonth_vghrsweek_m1i <- apply(anycaremonth_yes_ds1_vghrsweek,
2, mean) #Calculate m1i
anycaremonth_vghrsweek_sd1i <- apply(anycaremonth_yes_ds1_vghrsweek,
2, sd) #Calculate sd1i
anycaremonth_vghrsweek_n1i <- colSums(!
is.na(anycaremonth_yes_ds1_vghrsweek)) #Calculate n1i
anycaremonth_no_ds1_vghrsweek <- subset(anycaremonth_no_ds1, select =
c(vghrsweek)) #Subset 2i data
anycaremonth_vghrsweek_m2i <- apply(anycaremonth_no_ds1_vghrsweek,
2, mean) #Calculate m2i
anycaremonth_vghrsweek_sd2i <- apply(anycaremonth_no_ds1_vghrsweek,
2, sd) #Calculate sd2i
anycaremonth_vghrsweek_n2i <- colSums(!
is.na(anycaremonth_no_ds1_vghrsweek)) #Calculate n2i
ds1anycaremonth_meta <- data.frame(m1i = anycaremonth_vghrsweek_m1i,
sd1i = anycaremonth_vghrsweek_sd1i, n1i = anycaremonth_vghrsweek_n1i,
m2i = anycaremonth_vghrsweek_m2i, sd2i = anycaremonth_vghrsweek_sd2i,
n2i = anycaremonth_vghrsweek_n2i) #MA dataframe
ds1anycaremonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycaremonth_meta)
#Calculate yi and vi

#Study 2
anycaremonth_yes_ds2_vghrsweek <- subset(anycaremonth_yes_ds2, select
= c(vghrsweek)) #Subset 1i data
anycaremonth_vghrsweek_m1i <- apply(anycaremonth_yes_ds2_vghrsweek,
2, mean) #Calculate m1i
anycaremonth_vghrsweek_sd1i <- apply(anycaremonth_yes_ds2_vghrsweek,
2, sd) #Calculate sd1i
anycaremonth_vghrsweek_n1i <- colSums(!
is.na(anycaremonth_yes_ds2_vghrsweek)) #Calculate n1i
anycaremonth_no_ds2_vghrsweek <- subset(anycaremonth_no_ds2, select =
c(vghrsweek)) #Subset 2i data
anycaremonth_vghrsweek_m2i <- apply(anycaremonth_no_ds2_vghrsweek,
2, mean) #Calculate m2i
anycaremonth_vghrsweek_sd2i <- apply(anycaremonth_no_ds2_vghrsweek,
2, sd) #Calculate sd2i
anycaremonth_vghrsweek_n2i <- colSums(!
is.na(anycaremonth_no_ds2_vghrsweek)) #Calculate n2i
ds2anycaremonth_meta <- data.frame(m1i = anycaremonth_vghrsweek_m1i,
```

```
sd1i = anycaremonth_vghrsweek_sd1i, n1i = anycaremonth_vghrsweek_n1i,
m2i = anycaremonth_vghrsweek_m2i, sd2i = anycaremonth_vghrsweek_sd2i,
n2i = anycaremonth_vghrsweek_n2i) #MA dataframe
ds2anycaremonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycaremonth_meta)
#Calculate yi and vi

#FE meta-analysis
(anycaremonth_meta <- rbind(ds1anycaremonth_meta,
ds2anycaremonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 16.41667 15.84456  36 12.94714 12.88227 227  3.4695 7.7047
## 2 18.30000 18.61222  90 19.18768 23.79432 357 -0.8877 5.4350

(anycaremonth_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anycaremonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 1.4449, p-val = 0.2294
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.9146   1.7852   0.5123   0.6084  -2.5843   4.4135
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
anycaremonth_yes_ds1_vgdaysweek <- subset(anycaremonth_yes_ds1,
select = c(vgdaysweek)) #Subset 1i data
anycaremonth_vgdaysweek_m1i <-
apply(anycaremonth_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
anycaremonth_vgdaysweek_sd1i <-
apply(anycaremonth_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
anycaremonth_vgdaysweek_n1i <- colSums(!
is.na(anycaremonth_yes_ds1_vgdaysweek)) #Calculate n1i
anycaremonth_no_ds1_vgdaysweek <- subset(anycaremonth_no_ds1, select
= c(vgdaysweek)) #Subset 2i data
anycaremonth_vgdaysweek_m2i <-
apply(anycaremonth_no_ds1_vgdaysweek, 2, mean) #Calculate m2i
anycaremonth_vgdaysweek_sd2i <-
apply(anycaremonth_no_ds1_vgdaysweek, 2, sd) #Calculate sd2i
anycaremonth_vgdaysweek_n2i <- colSums(!
```

```
is.na(anycaremonth_no_ds1_vgdaysweek)) #Calculate n2i
ds1anycaremonth_meta <- data.frame(m1i =
anycaremonth_vgdaysweek_m1i, sd1i = anycaremonth_vgdaysweek_sd1i, n1i
= anycaremonth_vgdaysweek_n1i, m2i = anycaremonth_vgdaysweek_m2i,
sd2i = anycaremonth_vgdaysweek_sd2i, n2i =
anycaremonth_vgdaysweek_n2i) #MA dataframe
ds1anycaremonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1anycaremonth_meta)
#Calculate yi and vi

#Study 2
anycaremonth_yes_ds2_vgdaysweek <- subset(anycaremonth_yes_ds2,
select = c(vgdaysweek)) #Subset 1i data
anycaremonth_vgdaysweek_m1i <-
apply(anycaremonth_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
anycaremonth_vgdaysweek_sd1i <-
apply(anycaremonth_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
anycaremonth_vgdaysweek_n1i <- colSums(!
is.na(anycaremonth_yes_ds2_vgdaysweek)) #Calculate n1i
anycaremonth_no_ds2_vgdaysweek <- subset(anycaremonth_no_ds2, select
= c(vgdaysweek)) #Subset 2i data
anycaremonth_vgdaysweek_m2i <-
apply(anycaremonth_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
anycaremonth_vgdaysweek_sd2i <-
apply(anycaremonth_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
anycaremonth_vgdaysweek_n2i <- colSums(!
is.na(anycaremonth_no_ds2_vgdaysweek)) #Calculate n2i
ds2anycaremonth_meta <- data.frame(m1i =
anycaremonth_vgdaysweek_m1i, sd1i = anycaremonth_vgdaysweek_sd1i, n1i
= anycaremonth_vgdaysweek_n1i, m2i = anycaremonth_vgdaysweek_m2i,
sd2i = anycaremonth_vgdaysweek_sd2i, n2i =
anycaremonth_vgdaysweek_n2i) #MA dataframe
ds2anycaremonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2anycaremonth_meta)
#Calculate yi and vi

#FE meta-analysis
(anycaremonth_meta <- rbind(ds1anycaremonth_meta,
ds2anycaremonth_meta))

##       m1i     sd1i n1i     m2i     sd2i n2i     yi     vi
## 1 5.250000 2.259899  36 5.145374 2.226353 227 0.1046 0.1637
## 2 5.022222 2.044328  90 4.705882 2.238653 357 0.3163 0.0605

(anycaremonth_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anycaremonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
```

```
## Q(df = 1) = 0.1999, p-val = 0.6548
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2592   0.2101   1.2336   0.2174  -0.1526   0.6711
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Mental health care - discharge

Replicated Effect

Hours per day

Study 1

```
(vghrsday_mhdis_ds1 <- t.test(vghrsday ~ mhdis, data=ds1anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhdis
## t = 0.68063, df = 84.106, p-value = 0.498
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4493641  0.9170512
## sample estimates:
## mean in group 0 mean in group 1
##        2.775510        2.541667
```

Study 2

```
(vghrsday_mhdis_ds2 <- t.test(vghrsday ~ mhdis, data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhdis
## t = -2.4998, df = 205.15, p-value = 0.01321
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.5912819 -0.1879708
## sample estimates:
## mean in group 0 mean in group 1
##        3.194444        4.084071
```

Hours per week

Study 1

```
(vghrsweek_mhdis_ds1 <- t.test(vghrsweek ~ mhdis,
data=ds1anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhdis
## t = 0.70153, df = 82.026, p-value = 0.485
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -3.378858  7.060150
## sample estimates:
## mean in group 0 mean in group 1
##        16.44898        14.60833
```

Study 2

```
(vghrsweek_mhdis_ds2 <- t.test(vghrsweek ~ mhdis,
data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhdis
## t = -2.8177, df = 216.39, p-value = 0.005286
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -11.519971  -2.036813
## sample estimates:
## mean in group 0 mean in group 1
##        15.70833        22.48673
```

Days per week

Study 1

```
(vgdaysweek_mhdis_ds1 <- t.test(vgdaysweek ~ mhdis,
data=ds1anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhdis
## t = -0.3834, df = 88.029, p-value = 0.7024
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.9022650  0.6104283
## sample estimates:
## mean in group 0 mean in group 1
##        5.204082        5.350000
```

Study 2

```
(vgdaysweek_mhdis_ds2 <- t.test(vgdaysweek ~ mhdis,
data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhdis
## t = -1.5956, df = 110.58, p-value = 0.1134
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.1096841  0.1197628
## sample estimates:
## mean in group 0 mean in group 1
##        4.513889        5.008850
```

MD

Hours per day

```
#Study 1
mhdis_yes_ds1_vghrsday <- subset(mhdis_yes_ds1, select = c(vghrsday))
#Subset 1i data
mhdis_vghrsday_m1i <- apply(mhdis_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
mhdis_vghrsday_sd1i <- apply(mhdis_yes_ds1_vghrsday, 2, sd) #Calculate
sd1i
mhdis_vghrsday_n1i <- colSums(!is.na(mhdis_yes_ds1_vghrsday)) #Calculate
n1i
mhdis_no_ds1_vghrsday <- subset(mhdis_no_ds1, select = c(vghrsday))
#Subset 2i data
mhdis_vghrsday_m2i <- apply(mhdis_no_ds1_vghrsday, 2, mean) #Calculate
m2i
mhdis_vghrsday_sd2i <- apply(mhdis_no_ds1_vghrsday, 2, sd) #Calculate
sd2i
mhdis_vghrsday_n2i <- colSums(!is.na(mhdis_no_ds1_vghrsday)) #Calculate
n2i
ds1mhdis_meta <- data.frame(m1i = mhdis_vghrsday_m1i, sd1i =
mhdis_vghrsday_sd1i, n1i = mhdis_vghrsday_n1i, m2i =
mhdis_vghrsday_m2i, sd2i = mhdis_vghrsday_sd2i, n2i =
```

```
mhdis_vghrsday_n2i) #MA dataframe
ds1mhdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhdis_meta) #Calculate yi and vi

#Study 2
mhdis_yes_ds2_vghrsday <- subset(mhdis_yes_ds2, select = c(vghrsday))
#Subset 1i data
mhdis_vghrsday_m1i <- apply(mhdis_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
mhdis_vghrsday_sd1i <- apply(mhdis_yes_ds2_vghrsday, 2, sd) #Calculate
sd1i
mhdis_vghrsday_n1i <- colSums(!is.na(mhdis_yes_ds2_vghrsday)) #Calculate
n1i
mhdis_no_ds2_vghrsday <- subset(mhdis_no_ds2, select = c(vghrsday))
#Subset 2i data
mhdis_vghrsday_m2i <- apply(mhdis_no_ds2_vghrsday, 2, mean) #Calculate
m2i
mhdis_vghrsday_sd2i <- apply(mhdis_no_ds2_vghrsday, 2, sd) #Calculate
sd2i
mhdis_vghrsday_n2i <- colSums(!is.na(mhdis_no_ds2_vghrsday)) #Calculate
n2i
ds2mhdis_meta <- data.frame(m1i = mhdis_vghrsday_m1i, sd1i =
mhdis_vghrsday_sd1i, n1i = mhdis_vghrsday_n1i, m2i =
mhdis_vghrsday_m2i, sd2i = mhdis_vghrsday_sd2i, n2i =
mhdis_vghrsday_n2i) #MA dataframe
ds2mhdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhdis_meta) #Calculate yi and vi

#FE meta-analysis
(mhdis_meta <- rbind(ds1mhdis_meta, ds2mhdis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.541667 1.931150 120 2.775510 2.064232  49 -0.2338 0.1180
## 2 4.084071 3.691072 226 3.194444 2.185992  72  0.8896 0.1267

(mhdis_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=mhdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 5.1583, p-val = 0.0231
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.3081   0.2472   1.2465   0.2126  -0.1763   0.7926
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Hours per week

```
#Study 1
mhdis_yes_ds1_vghrsweek <- subset(mhdis_yes_ds1, select = c(vghrsweek))
#Subset 1i data
mhdis_vghrsweek_m1i <- apply(mhdis_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
mhdis_vghrsweek_sd1i <- apply(mhdis_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
mhdis_vghrsweek_n1i <- colSums(!is.na(mhdis_yes_ds1_vghrsweek))
#Calculate n1i
mhdis_no_ds1_vghrsweek <- subset(mhdis_no_ds1, select = c(vghrsweek))
#Subset 2i data
mhdis_vghrsweek_m2i <- apply(mhdis_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
mhdis_vghrsweek_sd2i <- apply(mhdis_no_ds1_vghrsweek, 2, sd) #Calculate
sd2i
mhdis_vghrsweek_n2i <- colSums(!is.na(mhdis_no_ds1_vghrsweek))
#Calculate n2i
ds1mhdis_meta <- data.frame(m1i = mhdis_vghrsweek_m1i, sd1i =
mhdis_vghrsweek_sd1i, n1i = mhdis_vghrsweek_n1i, m2i =
mhdis_vghrsweek_m2i, sd2i = mhdis_vghrsweek_sd2i, n2i =
mhdis_vghrsweek_n2i) #MA dataframe
ds1mhdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhdis_meta) #Calculate yi and vi

#Study 2
mhdis_yes_ds2_vghrsweek <- subset(mhdis_yes_ds2, select = c(vghrsweek))
#Subset 1i data
mhdis_vghrsweek_m1i <- apply(mhdis_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
mhdis_vghrsweek_sd1i <- apply(mhdis_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
mhdis_vghrsweek_n1i <- colSums(!is.na(mhdis_yes_ds2_vghrsweek))
#Calculate n1i
mhdis_no_ds2_vghrsweek <- subset(mhdis_no_ds2, select = c(vghrsweek))
#Subset 2i data
mhdis_vghrsweek_m2i <- apply(mhdis_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
mhdis_vghrsweek_sd2i <- apply(mhdis_no_ds2_vghrsweek, 2, sd) #Calculate
sd2i
mhdis_vghrsweek_n2i <- colSums(!is.na(mhdis_no_ds2_vghrsweek))
#Calculate n2i
ds2mhdis_meta <- data.frame(m1i = mhdis_vghrsweek_m1i, sd1i =
mhdis_vghrsweek_sd1i, n1i = mhdis_vghrsweek_n1i, m2i =
mhdis_vghrsweek_m2i, sd2i = mhdis_vghrsweek_sd2i, n2i =
mhdis_vghrsweek_n2i) #MA dataframe
ds2mhdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhdis_meta) #Calculate yi and vi
```

```
#FE meta-analysis
(mhdis_meta <- rbind(ds1mhdis_meta, ds2mhdis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 14.60833 14.42704 120 16.44898 15.88508  49 -1.8406 6.8842
## 2 22.48673 25.60178 226 15.70833 14.41775  72  6.7784 5.7873

(mhdis_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=mhdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 5.8626, p-val = 0.0155
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   2.8419   1.7732   1.6027   0.1090  -0.6334   6.3173
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
mhdis_yes_ds1_vgdaysweek <- subset(mhdis_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
mhdis_vgdaysweek_m1i <- apply(mhdis_yes_ds1_vgdaysweek, 2, mean)
#Calculate m1i
mhdis_vgdaysweek_sd1i <- apply(mhdis_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
mhdis_vgdaysweek_n1i <- colSums(!is.na(mhdis_yes_ds1_vgdaysweek))
#Calculate n1i
mhdis_no_ds1_vgdaysweek <- subset(mhdis_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
mhdis_vgdaysweek_m2i <- apply(mhdis_no_ds1_vgdaysweek, 2, mean)
#Calculate m2i
mhdis_vgdaysweek_sd2i <- apply(mhdis_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
mhdis_vgdaysweek_n2i <- colSums(!is.na(mhdis_no_ds1_vgdaysweek))
#Calculate n2i
ds1mhdis_meta <- data.frame(m1i = mhdis_vgdaysweek_m1i, sd1i =
mhdis_vgdaysweek_sd1i, n1i = mhdis_vgdaysweek_n1i, m2i =
mhdis_vgdaysweek_m2i, sd2i = mhdis_vgdaysweek_sd2i, n2i =
mhdis_vgdaysweek_n2i) #MA dataframe
ds1mhdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhdis_meta) #Calculate yi and vi
```

```r
#Study 2
mhdis_yes_ds2_vgdaysweek <- subset(mhdis_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
mhdis_vgdaysweek_m1i <- apply(mhdis_yes_ds2_vgdaysweek, 2, mean)
#Calculate m1i
mhdis_vgdaysweek_sd1i <- apply(mhdis_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
mhdis_vgdaysweek_n1i <- colSums(!is.na(mhdis_yes_ds2_vgdaysweek))
#Calculate n1i
mhdis_no_ds2_vgdaysweek <- subset(mhdis_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
mhdis_vgdaysweek_m2i <- apply(mhdis_no_ds2_vgdaysweek, 2, mean)
#Calculate m2i
mhdis_vgdaysweek_sd2i <- apply(mhdis_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
mhdis_vgdaysweek_n2i <- colSums(!is.na(mhdis_no_ds2_vgdaysweek))
#Calculate n2i
ds2mhdis_meta <- data.frame(m1i = mhdis_vgdaysweek_m1i, sd1i =
mhdis_vgdaysweek_sd1i, n1i = mhdis_vgdaysweek_n1i, m2i =
mhdis_vgdaysweek_m2i, sd2i = mhdis_vgdaysweek_sd2i, n2i =
mhdis_vgdaysweek_n2i) #MA dataframe
ds2mhdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i,
m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhdis_meta) #Calculate yi and vi

#FE meta-analysis
(mhdis_meta <- rbind(ds1mhdis_meta, ds2mhdis_meta))

##      m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.35000 2.221552 120 5.204082 2.254436  49 0.1459 0.1449
## 2 5.00885 2.122873 226 4.513889 2.343664  72 0.4950 0.0962

(mhdis_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=mhdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.5054, p-val = 0.4772
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.3556   0.2405   1.4790   0.1391  -0.1156   0.8269
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Mental health care - year

Replicated Effect

Hours per day

Study 1

```
(vghrsday_mhyear_ds1 <- t.test(vghrsday ~ mhyear,
data=ds1anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhyear
## t = 1.37, df = 166.67, p-value = 0.1725
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.1816303  1.0051432
## sample estimates:
## mean in group 0 mean in group 1
##        2.806818        2.395062
```

Study 2

```
(vghrsday_mhyear_ds2 <- t.test(vghrsday ~ mhyear,
data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhyear
## t = -1.123, df = 292.23, p-value = 0.2624
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.1855396  0.3241387
## sample estimates:
## mean in group 0 mean in group 1
##        3.614754        4.045455
```

Hours per week

Study 1

```
(vghrsweek_mhyear_ds1 <- t.test(vghrsweek ~ mhyear,
data=ds1anymhscreen))

##
##  Welch Two Sample t-test
```

```
##
## data:  vghrsweek by mhyear
## t = 1.378, df = 165.58, p-value = 0.1701
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.34943  7.58512
## sample estimates:
## mean in group 0 mean in group 1
##       16.63636       13.51852
```

Study 2

```
(vghrsweek_mhyear_ds2 <- t.test(vghrsweek ~ mhyear,
data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhyear
## t = -0.88549, df = 288.72, p-value = 0.3766
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -7.629388  2.894664
## sample estimates:
## mean in group 0 mean in group 1
##       19.45082       21.81818
```

Days per week

Study 1

```
(vgdaysweek_mhyear_ds1 <- t.test(vgdaysweek ~ mhyear,
data=ds1anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhyear
## t = -0.14358, df = 166.81, p-value = 0.886
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.7263392  0.6278543
## sample estimates:
## mean in group 0 mean in group 1
##       5.284091       5.333333
```

Study 2

```
(vgdaysweek_mhyear_ds2 <- t.test(vgdaysweek ~ mhyear,
data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhyear
## t = -0.45046, df = 246.26, p-value = 0.6528
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6330343  0.3973785
## sample estimates:
## mean in group 0 mean in group 1
##        4.819672        4.937500
```

MD

Hours per day

```
#Study 1
mhyear_yes_ds1_vghrsday <- subset(mhyear_yes_ds1, select = c(vghrsday))
#Subset 1i data
mhyear_vghrsday_m1i <- apply(mhyear_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
mhyear_vghrsday_sd1i <- apply(mhyear_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
mhyear_vghrsday_n1i <- colSums(!is.na(mhyear_yes_ds1_vghrsday))
#Calculate n1i
mhyear_no_ds1_vghrsday <- subset(mhyear_no_ds1, select = c(vghrsday))
#Subset 2i data
mhyear_vghrsday_m2i <- apply(mhyear_no_ds1_vghrsday, 2, mean)
#Calculate m2i
mhyear_vghrsday_sd2i <- apply(mhyear_no_ds1_vghrsday, 2, sd) #Calculate
sd2i
mhyear_vghrsday_n2i <- colSums(!is.na(mhyear_no_ds1_vghrsday))
#Calculate n2i
ds1mhyear_meta <- data.frame(m1i = mhyear_vghrsday_m1i, sd1i =
mhyear_vghrsday_sd1i, n1i = mhyear_vghrsday_n1i, m2i =
mhyear_vghrsday_m2i, sd2i = mhyear_vghrsday_sd2i, n2i =
mhyear_vghrsday_n2i) #MA dataframe
ds1mhyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhyear_meta) #Calculate yi
and vi

#Study 2
mhyear_yes_ds2_vghrsday <- subset(mhyear_yes_ds2, select = c(vghrsday))
#Subset 1i data
mhyear_vghrsday_m1i <- apply(mhyear_yes_ds2_vghrsday, 2, mean)
```

```
#Calculate m1i
mhyear_vghrsday_sd1i <- apply(mhyear_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
mhyear_vghrsday_n1i <- colSums(!is.na(mhyear_yes_ds2_vghrsday))
#Calculate n1i
mhyear_no_ds2_vghrsday <- subset(mhyear_no_ds2, select = c(vghrsday))
#Subset 2i data
mhyear_vghrsday_m2i <- apply(mhyear_no_ds2_vghrsday, 2, mean)
#Calculate m2i
mhyear_vghrsday_sd2i <- apply(mhyear_no_ds2_vghrsday, 2, sd) #Calculate
sd2i
mhyear_vghrsday_n2i <- colSums(!is.na(mhyear_no_ds2_vghrsday))
#Calculate n2i
ds2mhyear_meta <- data.frame(m1i = mhyear_vghrsday_m1i, sd1i =
mhyear_vghrsday_sd1i, n1i = mhyear_vghrsday_n1i, m2i =
mhyear_vghrsday_m2i, sd2i = mhyear_vghrsday_sd2i, n2i =
mhyear_vghrsday_n2i) #MA dataframe
ds2mhyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhyear_meta) #Calculate yi
and vi

#FE meta-analysis
(mhyear_meta <- rbind(ds1mhyear_meta, ds2mhyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.395062 1.828107  81 2.806818 2.078118  88 -0.4118 0.0903
## 2 4.045455 3.723007 176 3.614754 2.887553 122  0.4307 0.1471

(mhyear_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=mhyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.9892, p-val = 0.0838
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.0912   0.2366  -0.3857   0.6998  -0.5549   0.3724
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
mhyear_yes_ds1_vghrsweek <- subset(mhyear_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
```

```
mhyear_vghrsweek_m1i <- apply(mhyear_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
mhyear_vghrsweek_sd1i <- apply(mhyear_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
mhyear_vghrsweek_n1i <- colSums(!is.na(mhyear_yes_ds1_vghrsweek))
#Calculate n1i
mhyear_no_ds1_vghrsweek <- subset(mhyear_no_ds1, select =
c(vghrsweek)) #Subset 2i data
mhyear_vghrsweek_m2i <- apply(mhyear_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
mhyear_vghrsweek_sd2i <- apply(mhyear_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
mhyear_vghrsweek_n2i <- colSums(!is.na(mhyear_no_ds1_vghrsweek))
#Calculate n2i
ds1mhyear_meta <- data.frame(m1i = mhyear_vghrsweek_m1i, sd1i =
mhyear_vghrsweek_sd1i, n1i = mhyear_vghrsweek_n1i, m2i =
mhyear_vghrsweek_m2i, sd2i = mhyear_vghrsweek_sd2i, n2i =
mhyear_vghrsweek_n2i) #MA dataframe
ds1mhyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhyear_meta) #Calculate yi
and vi

#Study 2
mhyear_yes_ds2_vghrsweek <- subset(mhyear_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
mhyear_vghrsweek_m1i <- apply(mhyear_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
mhyear_vghrsweek_sd1i <- apply(mhyear_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
mhyear_vghrsweek_n1i <- colSums(!is.na(mhyear_yes_ds2_vghrsweek))
#Calculate n1i
mhyear_no_ds2_vghrsweek <- subset(mhyear_no_ds2, select =
c(vghrsweek)) #Subset 2i data
mhyear_vghrsweek_m2i <- apply(mhyear_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
mhyear_vghrsweek_sd2i <- apply(mhyear_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
mhyear_vghrsweek_n2i <- colSums(!is.na(mhyear_no_ds2_vghrsweek))
#Calculate n2i
ds2mhyear_meta <- data.frame(m1i = mhyear_vghrsweek_m1i, sd1i =
mhyear_vghrsweek_sd1i, n1i = mhyear_vghrsweek_n1i, m2i =
mhyear_vghrsweek_m2i, sd2i = mhyear_vghrsweek_sd2i, n2i =
mhyear_vghrsweek_n2i) #MA dataframe
ds2mhyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhyear_meta) #Calculate yi
and vi

#FE meta-analysis
(mhyear_meta <- rbind(ds1mhyear_meta, ds2mhyear_meta))
```

```
##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 13.51852 13.39600  81 16.63636 15.98576  88 -3.1178 5.1194
## 2 21.81818 25.40801 176 19.45082 20.60374 122  2.3674 7.1476

(mhyear_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=mhyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.4527, p-val = 0.1173
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.8287   1.7271  -0.4798   0.6314  -4.2138   2.5564
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
mhyear_yes_ds1_vgdaysweek <- subset(mhyear_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
mhyear_vgdaysweek_m1i <- apply(mhyear_yes_ds1_vgdaysweek, 2, mean)
#Calculate m1i
mhyear_vgdaysweek_sd1i <- apply(mhyear_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
mhyear_vgdaysweek_n1i <- colSums(!is.na(mhyear_yes_ds1_vgdaysweek))
#Calculate n1i
mhyear_no_ds1_vgdaysweek <- subset(mhyear_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
mhyear_vgdaysweek_m2i <- apply(mhyear_no_ds1_vgdaysweek, 2, mean)
#Calculate m2i
mhyear_vgdaysweek_sd2i <- apply(mhyear_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
mhyear_vgdaysweek_n2i <- colSums(!is.na(mhyear_no_ds1_vgdaysweek))
#Calculate n2i
ds1mhyear_meta <- data.frame(m1i = mhyear_vgdaysweek_m1i, sd1i =
mhyear_vgdaysweek_sd1i, n1i = mhyear_vgdaysweek_n1i, m2i =
mhyear_vgdaysweek_m2i, sd2i = mhyear_vgdaysweek_sd2i, n2i =
mhyear_vgdaysweek_n2i) #MA dataframe
ds1mhyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhyear_meta) #Calculate yi
and vi

#Study 2
```

```r
mhyear_yes_ds2_vgdaysweek <- subset(mhyear_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
mhyear_vgdaysweek_m1i <- apply(mhyear_yes_ds2_vgdaysweek, 2, mean)
#Calculate m1i
mhyear_vgdaysweek_sd1i <- apply(mhyear_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
mhyear_vgdaysweek_n1i <- colSums(!is.na(mhyear_yes_ds2_vgdaysweek))
#Calculate n1i
mhyear_no_ds2_vgdaysweek <- subset(mhyear_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
mhyear_vgdaysweek_m2i <- apply(mhyear_no_ds2_vgdaysweek, 2, mean)
#Calculate m2i
mhyear_vgdaysweek_sd2i <- apply(mhyear_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
mhyear_vgdaysweek_n2i <- colSums(!is.na(mhyear_no_ds2_vgdaysweek))
#Calculate n2i
ds2mhyear_meta <- data.frame(m1i = mhyear_vgdaysweek_m1i, sd1i =
mhyear_vgdaysweek_sd1i, n1i = mhyear_vgdaysweek_n1i, m2i =
mhyear_vgdaysweek_m2i, sd2i = mhyear_vgdaysweek_sd2i, n2i =
mhyear_vgdaysweek_n2i) #MA dataframe
ds2mhyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhyear_meta) #Calculate yi
and vi

#FE meta-analysis
(mhyear_meta <- rbind(ds1mhyear_meta, ds2mhyear_meta))

##       m1i     sd1i n1i     m2i     sd2i n2i     yi     vi
## 1 5.333333 2.173707  81 5.284091 2.284122  88 0.0492 0.1176
## 2 4.937500 2.111618 176 4.819672 2.292699 122 0.1178 0.0684

(mhyear_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=mhyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0253, p-val = 0.8737
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0926   0.2080   0.4452   0.6561  -0.3150   0.5002
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Mental health care - month

Replicated Effect

Hours per day

Study 1

```
(vghrsday_mhmonth_ds1 <- t.test(vghrsday ~ mhmonth,
data=ds1anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhmonth
## t = -1.4666, df = 38.807, p-value = 0.1505
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.5155007  0.2416398
## sample estimates:
## mean in group 0 mean in group 1
##        2.496403        3.133333
```

Study 2

```
(vghrsday_mhmonth_ds2 <- t.test(vghrsday ~ mhmonth,
data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhmonth
## t = 0.73059, df = 164.41, p-value = 0.4661
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5045699  1.0972713
## sample estimates:
## mean in group 0 mean in group 1
##        3.945701        3.649351
```

Hours per week

Study 1

```
(vghrsweek_mhmonth_ds1 <- t.test(vghrsweek ~ mhmonth,
data=ds1anymhscreen))

##
##  Welch Two Sample t-test
```

```
##
## data:  vghrsweek by mhmonth
## t = -1.2268, df = 39.024, p-value = 0.2272
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -10.59930   2.59594
## sample estimates:
## mean in group 0 mean in group 1
##        14.43165        18.43333
```

Study 2

```
(vghrsweek_mhmonth_ds2 <- t.test(vghrsweek ~ mhmonth,
data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhmonth
## t = 1.1423, df = 165.09, p-value = 0.255
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.326368  8.713746
## sample estimates:
## mean in group 0 mean in group 1
##        21.67421        18.48052
```

Days per week

Study 1

```
(vgdaysweek_mhmonth_ds1 <- t.test(vgdaysweek ~ mhmonth,
data=ds1anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhmonth
## t = -0.71491, df = 43.295, p-value = 0.4785
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.2029034  0.5731672
## sample estimates:
## mean in group 0 mean in group 1
##        5.251799        5.566667
```

Study 2

```
(vgdaysweek_mhmonth_ds2 <- t.test(vgdaysweek ~ mhmonth,
data=ds2anymhscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhmonth
## t = 0.21881, df = 143.21, p-value = 0.8271
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4886324  0.6102754
## sample estimates:
## mean in group 0 mean in group 1
##        4.904977        4.844156
```

MD

Hours per day

```
#Study 1
mhmonth_yes_ds1_vghrsday <- subset(mhmonth_yes_ds1, select =
c(vghrsday)) #Subset 1i data
mhmonth_vghrsday_m1i <- apply(mhmonth_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
mhmonth_vghrsday_sd1i <- apply(mhmonth_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
mhmonth_vghrsday_n1i <- colSums(!is.na(mhmonth_yes_ds1_vghrsday))
#Calculate n1i
mhmonth_no_ds1_vghrsday <- subset(mhmonth_no_ds1, select =
c(vghrsday)) #Subset 2i data
mhmonth_vghrsday_m2i <- apply(mhmonth_no_ds1_vghrsday, 2, mean)
#Calculate m2i
mhmonth_vghrsday_sd2i <- apply(mhmonth_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
mhmonth_vghrsday_n2i <- colSums(!is.na(mhmonth_no_ds1_vghrsday))
#Calculate n2i
ds1mhmonth_meta <- data.frame(m1i = mhmonth_vghrsday_m1i, sd1i =
mhmonth_vghrsday_sd1i, n1i = mhmonth_vghrsday_n1i, m2i =
mhmonth_vghrsday_m2i, sd2i = mhmonth_vghrsday_sd2i, n2i =
mhmonth_vghrsday_n2i) #MA dataframe
ds1mhmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhmonth_meta) #Calculate
yi and vi

#Study 2
mhmonth_yes_ds2_vghrsday <- subset(mhmonth_yes_ds2, select =
c(vghrsday)) #Subset 1i data
mhmonth_vghrsday_m1i <- apply(mhmonth_yes_ds2_vghrsday, 2, mean)
```

```
#Calculate m1i
mhmonth_vghrsday_sd1i <- apply(mhmonth_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
mhmonth_vghrsday_n1i <- colSums(!is.na(mhmonth_yes_ds2_vghrsday))
#Calculate n1i
mhmonth_no_ds2_vghrsday <- subset(mhmonth_no_ds2, select =
c(vghrsday)) #Subset 2i data
mhmonth_vghrsday_m2i <- apply(mhmonth_no_ds2_vghrsday, 2, mean)
#Calculate m2i
mhmonth_vghrsday_sd2i <- apply(mhmonth_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
mhmonth_vghrsday_n2i <- colSums(!is.na(mhmonth_no_ds2_vghrsday))
#Calculate n2i
ds2mhmonth_meta <- data.frame(m1i = mhmonth_vghrsday_m1i, sd1i =
mhmonth_vghrsday_sd1i, n1i = mhmonth_vghrsday_n1i, m2i =
mhmonth_vghrsday_m2i, sd2i = mhmonth_vghrsday_sd2i, n2i =
mhmonth_vghrsday_n2i) #MA dataframe
ds2mhmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhmonth_meta) #Calculate
yi and vi

#FE meta-analysis
(mhmonth_meta <- rbind(ds1mhmonth_meta, ds2mhmonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 3.133333 2.208656  30 2.496403 1.901083 139  0.6369 0.1886
## 2 3.649351 2.864328  77 3.945701 3.579835 221 -0.2964 0.1645

(mhmonth_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=mhmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.4665, p-val = 0.1163
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.1385   0.2964   0.4672   0.6404  -0.4425   0.7195
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
mhmonth_yes_ds1_vghrsweek <- subset(mhmonth_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
```

```
mhmonth_vghrsweek_m1i <- apply(mhmonth_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
mhmonth_vghrsweek_sd1i <- apply(mhmonth_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
mhmonth_vghrsweek_n1i <- colSums(!is.na(mhmonth_yes_ds1_vghrsweek))
#Calculate n1i
mhmonth_no_ds1_vghrsweek <- subset(mhmonth_no_ds1, select =
c(vghrsweek)) #Subset 2i data
mhmonth_vghrsweek_m2i <- apply(mhmonth_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
mhmonth_vghrsweek_sd2i <- apply(mhmonth_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
mhmonth_vghrsweek_n2i <- colSums(!is.na(mhmonth_no_ds1_vghrsweek))
#Calculate n2i
ds1mhmonth_meta <- data.frame(m1i = mhmonth_vghrsweek_m1i, sd1i =
mhmonth_vghrsweek_sd1i, n1i = mhmonth_vghrsweek_n1i, m2i =
mhmonth_vghrsweek_m2i, sd2i = mhmonth_vghrsweek_sd2i, n2i =
mhmonth_vghrsweek_n2i) #MA dataframe
ds1mhmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhmonth_meta) #Calculate
yi and vi

#Study 2
mhmonth_yes_ds2_vghrsweek <- subset(mhmonth_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
mhmonth_vghrsweek_m1i <- apply(mhmonth_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
mhmonth_vghrsweek_sd1i <- apply(mhmonth_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
mhmonth_vghrsweek_n1i <- colSums(!is.na(mhmonth_yes_ds2_vghrsweek))
#Calculate n1i
mhmonth_no_ds2_vghrsweek <- subset(mhmonth_no_ds2, select =
c(vghrsweek)) #Subset 2i data
mhmonth_vghrsweek_m2i <- apply(mhmonth_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
mhmonth_vghrsweek_sd2i <- apply(mhmonth_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
mhmonth_vghrsweek_n2i <- colSums(!is.na(mhmonth_no_ds2_vghrsweek))
#Calculate n2i
ds2mhmonth_meta <- data.frame(m1i = mhmonth_vghrsweek_m1i, sd1i =
mhmonth_vghrsweek_sd1i, n1i = mhmonth_vghrsweek_n1i, m2i =
mhmonth_vghrsweek_m2i, sd2i = mhmonth_vghrsweek_sd2i, n2i =
mhmonth_vghrsweek_n2i) #MA dataframe
ds2mhmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhmonth_meta) #Calculate
yi and vi

#FE meta-analysis
(mhmonth_meta <- rbind(ds1mhmonth_meta, ds2mhmonth_meta))
```

```
##       m1i     sd1i n1i      m2i     sd2i n2i      yi      vi
## 1 18.43333 16.56478  30 14.43165 14.40765 139  4.0017 10.6398
## 2 18.48052 19.71415  77 21.67421 24.73721 221 -3.1937  7.8163

(mhmonth_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=mhmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.8052, p-val = 0.0940
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.1464   2.1227  -0.0690   0.9450  -4.3069   4.0141
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
mhmonth_yes_ds1_vgdaysweek <- subset(mhmonth_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
mhmonth_vgdaysweek_m1i <- apply(mhmonth_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
mhmonth_vgdaysweek_sd1i <- apply(mhmonth_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
mhmonth_vgdaysweek_n1i <- colSums(!
is.na(mhmonth_yes_ds1_vgdaysweek)) #Calculate n1i
mhmonth_no_ds1_vgdaysweek <- subset(mhmonth_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
mhmonth_vgdaysweek_m2i <- apply(mhmonth_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
mhmonth_vgdaysweek_sd2i <- apply(mhmonth_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
mhmonth_vgdaysweek_n2i <- colSums(!
is.na(mhmonth_no_ds1_vgdaysweek)) #Calculate n2i
ds1mhmonth_meta <- data.frame(m1i = mhmonth_vgdaysweek_m1i, sd1i =
mhmonth_vgdaysweek_sd1i, n1i = mhmonth_vgdaysweek_n1i, m2i =
mhmonth_vgdaysweek_m2i, sd2i = mhmonth_vgdaysweek_sd2i, n2i =
mhmonth_vgdaysweek_n2i) #MA dataframe
ds1mhmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1mhmonth_meta) #Calculate
yi and vi

#Study 2
```

```r
mhmonth_yes_ds2_vgdaysweek <- subset(mhmonth_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
mhmonth_vgdaysweek_m1i <- apply(mhmonth_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
mhmonth_vgdaysweek_sd1i <- apply(mhmonth_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
mhmonth_vgdaysweek_n1i <- colSums(!
is.na(mhmonth_yes_ds2_vgdaysweek)) #Calculate n1i
mhmonth_no_ds2_vgdaysweek <- subset(mhmonth_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
mhmonth_vgdaysweek_m2i <- apply(mhmonth_no_ds2_vgdaysweek, 2,
mean) #Calculate m2i
mhmonth_vgdaysweek_sd2i <- apply(mhmonth_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
mhmonth_vgdaysweek_n2i <- colSums(!
is.na(mhmonth_no_ds2_vgdaysweek)) #Calculate n2i
ds2mhmonth_meta <- data.frame(m1i = mhmonth_vgdaysweek_m1i, sd1i =
mhmonth_vgdaysweek_sd1i, n1i = mhmonth_vgdaysweek_n1i, m2i =
mhmonth_vgdaysweek_m2i, sd2i = mhmonth_vgdaysweek_sd2i, n2i =
mhmonth_vgdaysweek_n2i) #MA dataframe
ds2mhmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2mhmonth_meta) #Calculate
yi and vi

#FE meta-analysis
(mhmonth_meta <- rbind(ds1mhmonth_meta, ds2mhmonth_meta))

##       m1i     sd1i n1i     m2i     sd2i n2i     yi     vi
## 1 5.566667 2.176415  30 5.251799 2.239609 139  0.3149 0.1940
## 2 4.844156 2.052373  77 4.904977 2.233021 221 -0.0608 0.0773

(mhmonth_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=mhmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.5204, p-val = 0.4707
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0462   0.2351   0.1965   0.8442  -0.4145   0.5069
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

PTSD care - discharge

Replicated Effect

Hours per day

Study 1

```
(vghrsday_ptsddis_ds1 <- t.test(vghrsday ~ mhdis, data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhdis
## t = 0.66454, df = 64.56, p-value = 0.5087
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5226871  1.0438913
## sample estimates:
## mean in group 0 mean in group 1
##        2.756098        2.495495
```

Study 2

```
(vghrsday_ptsddis_ds2 <- t.test(vghrsday ~ mhdis, data=ds2ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhdis
## t = -1.9646, df = 93.121, p-value = 0.05244
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.90364795  0.01021166
## sample estimates:
## mean in group 0 mean in group 1
##        3.285714        4.232432
```

Hours per week

Study 1

```
(vghrsweek_ptsddis_ds1 <- t.test(vghrsweek ~ mhdis, data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhdis
## t = 0.6953, df = 62.304, p-value = 0.4895
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -3.958218  8.181026
## sample estimates:
## mean in group 0 mean in group 1
##       16.21951       14.10811
```

Study 2

```
(vghrsweek_ptsddis_ds2 <- t.test(vghrsweek ~ mhdis, data=ds2ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhdis
## t = -2.4482, df = 104.85, p-value = 0.01602
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -13.96804  -1.46697
## sample estimates:
## mean in group 0 mean in group 1
##       16.30952       24.02703
```

Days per week

Study 1

```
(vgdaysweek_ptsddis_ds1 <- t.test(vgdaysweek ~ mhdis, data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhdis
## t = -0.67344, df = 70.145, p-value = 0.5029
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.121152  0.555123
## sample estimates:
## mean in group 0 mean in group 1
##       4.951220       5.234234
```

Study 2

```
(vgdaysweek_ptsddis_ds2 <- t.test(vgdaysweek ~ mhdis, data=ds2ptsd))

##
##  Welch Two Sample t-test
##
```

```
## data:  vgdaysweek by mhdis
## t = -1.3444, df = 57.315, p-value = 0.1841
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.3035798  0.2562181
## sample estimates:
## mean in group 0 mean in group 1
##        4.595238        5.118919
```

MD

Hours per day

```
#Study 1
ptsddis_yes_ds1_vghrsday <- subset(ptsddis_yes_ds1, select = c(vghrsday))
#Subset 1i data
ptsddis_vghrsday_m1i <- apply(ptsddis_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
ptsddis_vghrsday_sd1i <- apply(ptsddis_yes_ds1_vghrsday, 2, sd) #Calculate
sd1i
ptsddis_vghrsday_n1i <- colSums(!is.na(ptsddis_yes_ds1_vghrsday))
#Calculate n1i
ptsddis_no_ds1_vghrsday <- subset(ptsddis_no_ds1, select = c(vghrsday))
#Subset 2i data
ptsddis_vghrsday_m2i <- apply(ptsddis_no_ds1_vghrsday, 2, mean)
#Calculate m2i
ptsddis_vghrsday_sd2i <- apply(ptsddis_no_ds1_vghrsday, 2, sd) #Calculate
sd2i
ptsddis_vghrsday_n2i <- colSums(!is.na(ptsddis_no_ds1_vghrsday))
#Calculate n2i
ds1ptsddis_meta <- data.frame(m1i = ptsddis_vghrsday_m1i, sd1i =
ptsddis_vghrsday_sd1i, n1i = ptsddis_vghrsday_n1i, m2i =
ptsddis_vghrsday_m2i, sd2i = ptsddis_vghrsday_sd2i, n2i =
ptsddis_vghrsday_n2i) #MA dataframe
ds1ptsddis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsddis_meta) #Calculate yi
and vi

#Study 2
ptsddis_yes_ds2_vghrsday <- subset(ptsddis_yes_ds2, select = c(vghrsday))
#Subset 1i data
ptsddis_vghrsday_m1i <- apply(ptsddis_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
ptsddis_vghrsday_sd1i <- apply(ptsddis_yes_ds2_vghrsday, 2, sd) #Calculate
sd1i
ptsddis_vghrsday_n1i <- colSums(!is.na(ptsddis_yes_ds2_vghrsday))
#Calculate n1i
ptsddis_no_ds2_vghrsday <- subset(ptsddis_no_ds2, select = c(vghrsday))
#Subset 2i data
```

```
ptsddis_vghrsday_m2i <- apply(ptsddis_no_ds2_vghrsday, 2, mean)
#Calculate m2i
ptsddis_vghrsday_sd2i <- apply(ptsddis_no_ds2_vghrsday, 2, sd) #Calculate
sd2i
ptsddis_vghrsday_n2i <- colSums(!is.na(ptsddis_no_ds2_vghrsday))
#Calculate n2i
ds2ptsddis_meta <- data.frame(m1i = ptsddis_vghrsday_m1i, sd1i =
ptsddis_vghrsday_sd1i, n1i = ptsddis_vghrsday_n1i, m2i =
ptsddis_vghrsday_m2i, sd2i = ptsddis_vghrsday_sd2i, n2i =
ptsddis_vghrsday_n2i) #MA dataframe
ds2ptsddis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsddis_meta) #Calculate yi
and vi

#FE meta-analysis
(ptsddis_meta <- rbind(ds1ptsddis_meta, ds2ptsddis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.495495 1.958078 111 2.756098 2.211114  41 -0.2606 0.1538
## 2 4.232432 3.923872 185 3.285714 2.501567  42  0.9467 0.2322

(ptsddis_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=ptsddis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 3.7761, p-val = 0.0520
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2204   0.3042   0.7246   0.4687  -0.3758   0.8166
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Hours per week

```
#Study 1
ptsddis_yes_ds1_vghrsweek <- subset(ptsddis_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
ptsddis_vghrsweek_m1i <- apply(ptsddis_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
ptsddis_vghrsweek_sd1i <- apply(ptsddis_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
ptsddis_vghrsweek_n1i <- colSums(!is.na(ptsddis_yes_ds1_vghrsweek))
#Calculate n1i
ptsddis_no_ds1_vghrsweek <- subset(ptsddis_no_ds1, select = c(vghrsweek))
```

```r
#Subset 2i data
ptsddis_vghrsweek_m2i <- apply(ptsddis_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
ptsddis_vghrsweek_sd2i <- apply(ptsddis_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
ptsddis_vghrsweek_n2i <- colSums(!is.na(ptsddis_no_ds1_vghrsweek))
#Calculate n2i
ds1ptsddis_meta <- data.frame(m1i = ptsddis_vghrsweek_m1i, sd1i =
ptsddis_vghrsweek_sd1i, n1i = ptsddis_vghrsweek_n1i, m2i =
ptsddis_vghrsweek_m2i, sd2i = ptsddis_vghrsweek_sd2i, n2i =
ptsddis_vghrsweek_n2i) #MA dataframe
ds1ptsddis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsddis_meta) #Calculate yi
and vi

#Study 2
ptsddis_yes_ds2_vghrsweek <- subset(ptsddis_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
ptsddis_vghrsweek_m1i <- apply(ptsddis_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
ptsddis_vghrsweek_sd1i <- apply(ptsddis_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
ptsddis_vghrsweek_n1i <- colSums(!is.na(ptsddis_yes_ds2_vghrsweek))
#Calculate n1i
ptsddis_no_ds2_vghrsweek <- subset(ptsddis_no_ds2, select = c(vghrsweek))
#Subset 2i data
ptsddis_vghrsweek_m2i <- apply(ptsddis_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
ptsddis_vghrsweek_sd2i <- apply(ptsddis_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
ptsddis_vghrsweek_n2i <- colSums(!is.na(ptsddis_no_ds2_vghrsweek))
#Calculate n2i
ds2ptsddis_meta <- data.frame(m1i = ptsddis_vghrsweek_m1i, sd1i =
ptsddis_vghrsweek_sd1i, n1i = ptsddis_vghrsweek_n1i, m2i =
ptsddis_vghrsweek_m2i, sd2i = ptsddis_vghrsweek_sd2i, n2i =
ptsddis_vghrsweek_n2i) #MA dataframe
ds2ptsddis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsddis_meta) #Calculate yi
and vi

#FE meta-analysis
(ptsddis_meta <- rbind(ds1ptsddis_meta, ds2ptsddis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 14.10811 14.61528 111 16.21951 17.29669  41 -2.1114 9.2213
## 2 24.02703 27.27107 185 16.30952 15.76425  42  7.7175 9.9370

(ptsddis_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=ptsddis_meta))
```

```
##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 5.0426, p-val = 0.0247
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   2.6195   2.1870   1.1978   0.2310  -1.6669   6.9059
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
ptsddis_yes_ds1_vgdaysweek <- subset(ptsddis_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
ptsddis_vgdaysweek_m1i <- apply(ptsddis_yes_ds1_vgdaysweek, 2, mean)
#Calculate m1i
ptsddis_vgdaysweek_sd1i <- apply(ptsddis_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
ptsddis_vgdaysweek_n1i <- colSums(!is.na(ptsddis_yes_ds1_vgdaysweek))
#Calculate n1i
ptsddis_no_ds1_vgdaysweek <- subset(ptsddis_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
ptsddis_vgdaysweek_m2i <- apply(ptsddis_no_ds1_vgdaysweek, 2, mean)
#Calculate m2i
ptsddis_vgdaysweek_sd2i <- apply(ptsddis_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
ptsddis_vgdaysweek_n2i <- colSums(!is.na(ptsddis_no_ds1_vgdaysweek))
#Calculate n2i
ds1ptsddis_meta <- data.frame(m1i = ptsddis_vgdaysweek_m1i, sd1i =
ptsddis_vgdaysweek_sd1i, n1i = ptsddis_vgdaysweek_n1i, m2i =
ptsddis_vgdaysweek_m2i, sd2i = ptsddis_vgdaysweek_sd2i, n2i =
ptsddis_vgdaysweek_n2i) #MA dataframe
ds1ptsddis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsddis_meta) #Calculate yi
and vi

#Study 2
ptsddis_yes_ds2_vgdaysweek <- subset(ptsddis_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
ptsddis_vgdaysweek_m1i <- apply(ptsddis_yes_ds2_vgdaysweek, 2, mean)
#Calculate m1i
ptsddis_vgdaysweek_sd1i <- apply(ptsddis_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
ptsddis_vgdaysweek_n1i <- colSums(!is.na(ptsddis_yes_ds2_vgdaysweek))
```

```r
#Calculate n1i
ptsddis_no_ds2_vgdaysweek <- subset(ptsddis_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
ptsddis_vgdaysweek_m2i <- apply(ptsddis_no_ds2_vgdaysweek, 2, mean)
#Calculate m2i
ptsddis_vgdaysweek_sd2i <- apply(ptsddis_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
ptsddis_vgdaysweek_n2i <- colSums(!is.na(ptsddis_no_ds2_vgdaysweek))
#Calculate n2i
ds2ptsddis_meta <- data.frame(m1i = ptsddis_vgdaysweek_m1i, sd1i =
ptsddis_vgdaysweek_sd1i, n1i = ptsddis_vgdaysweek_n1i, m2i =
ptsddis_vgdaysweek_m2i, sd2i = ptsddis_vgdaysweek_sd2i, n2i =
ptsddis_vgdaysweek_n2i) #MA dataframe
ds2ptsddis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsddis_meta) #Calculate yi
and vi

#FE meta-analysis
(ptsddis_meta <- rbind(ds1ptsddis_meta, ds2ptsddis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.234234 2.264167 111 4.951220 2.312479  41 0.2830 0.1766
## 2 5.118919 2.102514 185 4.595238 2.317058  42 0.5237 0.1517

(ptsddis_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=ptsddis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.1764, p-val = 0.6745
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.4125   0.2857   1.4438   0.1488  -0.1474   0.9724
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

PTSD care - year

Replicated Effect

Hours per day

Study 1

```
(vghrsday_ptsdyear_ds1 <- t.test(vghrsday ~ mhyear, data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhyear
## t = 1.4862, df = 146.23, p-value = 0.1394
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.1599992  1.1303888
## sample estimates:
## mean in group 0 mean in group 1
##        2.805195        2.320000
```

Study 2

```
(vghrsday_ptsdyear_ds2 <- t.test(vghrsday ~ mhyear, data=ds2ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhyear
## t = -0.33394, df = 177.32, p-value = 0.7388
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.1420259  0.8114631
## sample estimates:
## mean in group 0 mean in group 1
##        3.948052        4.113333
```

Hours per week

Study 1

```
(vghrsweek_ptsdyear_ds1 <- t.test(vghrsweek ~ mhyear, data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhyear
## t = 1.4665, df = 143.08, p-value = 0.1447
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.261923  8.516988
## sample estimates:
## mean in group 0 mean in group 1
##       16.46753       12.84000
```

Study 2

```
(vghrsweek_ptsdyear_ds2 <- t.test(vghrsweek ~ mhyear, data=ds2ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhyear
## t = 0.044351, df = 168.57, p-value = 0.9647
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -6.728306  7.037570
## sample estimates:
## mean in group 0 mean in group 1
##       22.70130       22.54667
```

Days per week

Study 1

```
(vgdaysweek_ptsdyear_ds1 <- t.test(vgdaysweek ~ mhyear, data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhyear
## t = -0.36734, df = 149.88, p-value = 0.7139
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.8659945  0.5944794
## sample estimates:
## mean in group 0 mean in group 1
##       5.090909       5.226667
```

Study 2

```
(vgdaysweek_ptsdyear_ds2 <- t.test(vgdaysweek ~ mhyear, data=ds2ptsd))

##
##  Welch Two Sample t-test
##
```

```
## data:  vgdaysweek by mhyear
## t = 0.14589, df = 142.23, p-value = 0.8842
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5682531  0.6588159
## sample estimates:
## mean in group 0 mean in group 1
##       5.051948       5.006667
```

MD

Hours per day

```
#Study 1
ptsdyear_yes_ds1_vghrsday <- subset(ptsdyear_yes_ds1, select =
c(vghrsday)) #Subset 1i data
ptsdyear_vghrsday_m1i <- apply(ptsdyear_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
ptsdyear_vghrsday_sd1i <- apply(ptsdyear_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
ptsdyear_vghrsday_n1i <- colSums(!is.na(ptsdyear_yes_ds1_vghrsday))
#Calculate n1i
ptsdyear_no_ds1_vghrsday <- subset(ptsdyear_no_ds1, select = c(vghrsday))
#Subset 2i data
ptsdyear_vghrsday_m2i <- apply(ptsdyear_no_ds1_vghrsday, 2, mean)
#Calculate m2i
ptsdyear_vghrsday_sd2i <- apply(ptsdyear_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
ptsdyear_vghrsday_n2i <- colSums(!is.na(ptsdyear_no_ds1_vghrsday))
#Calculate n2i
ds1ptsdyear_meta <- data.frame(m1i = ptsdyear_vghrsday_m1i, sd1i =
ptsdyear_vghrsday_sd1i, n1i = ptsdyear_vghrsday_n1i, m2i =
ptsdyear_vghrsday_m2i, sd2i = ptsdyear_vghrsday_sd2i, n2i =
ptsdyear_vghrsday_n2i) #MA dataframe
ds1ptsdyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsdyear_meta) #Calculate
yi and vi

#Study 2
ptsdyear_yes_ds2_vghrsday <- subset(ptsdyear_yes_ds2, select =
c(vghrsday)) #Subset 1i data
ptsdyear_vghrsday_m1i <- apply(ptsdyear_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
ptsdyear_vghrsday_sd1i <- apply(ptsdyear_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
ptsdyear_vghrsday_n1i <- colSums(!is.na(ptsdyear_yes_ds2_vghrsday))
#Calculate n1i
ptsdyear_no_ds2_vghrsday <- subset(ptsdyear_no_ds2, select = c(vghrsday))
#Subset 2i data
```

```
ptsdyear_vghrsday_m2i <- apply(ptsdyear_no_ds2_vghrsday, 2, mean)
#Calculate m2i
ptsdyear_vghrsday_sd2i <- apply(ptsdyear_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
ptsdyear_vghrsday_n2i <- colSums(!is.na(ptsdyear_no_ds2_vghrsday))
#Calculate n2i
ds2ptsdyear_meta <- data.frame(m1i = ptsdyear_vghrsday_m1i, sd1i =
ptsdyear_vghrsday_sd1i, n1i = ptsdyear_vghrsday_n1i, m2i =
ptsdyear_vghrsday_m2i, sd2i = ptsdyear_vghrsday_sd2i, n2i =
ptsdyear_vghrsday_n2i) #MA dataframe
ds2ptsdyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsdyear_meta) #Calculate
yi and vi

#FE meta-analysis
(ptsdyear_meta <- rbind(ds1ptsdyear_meta, ds2ptsdyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.320000 1.817036  75 2.805195 2.194724  77 -0.4852 0.1066
## 2 4.113333 3.914414 150 3.948052 3.316213  77  0.1653 0.2450

(ptsdyear_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=ptsdyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 1.2036, p-val = 0.2726
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.2880   0.2725  -1.0568   0.2906  -0.8221   0.2461
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
ptsdyear_yes_ds1_vghrsweek <- subset(ptsdyear_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
ptsdyear_vghrsweek_m1i <- apply(ptsdyear_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
ptsdyear_vghrsweek_sd1i <- apply(ptsdyear_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
ptsdyear_vghrsweek_n1i <- colSums(!is.na(ptsdyear_yes_ds1_vghrsweek))
#Calculate n1i
ptsdyear_no_ds1_vghrsweek <- subset(ptsdyear_no_ds1, select =
```

```
c(vghrsweek)) #Subset 2i data
ptsdyear_vghrsweek_m2i <- apply(ptsdyear_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
ptsdyear_vghrsweek_sd2i <- apply(ptsdyear_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
ptsdyear_vghrsweek_n2i <- colSums(!is.na(ptsdyear_no_ds1_vghrsweek))
#Calculate n2i
ds1ptsdyear_meta <- data.frame(m1i = ptsdyear_vghrsweek_m1i, sd1i =
ptsdyear_vghrsweek_sd1i, n1i = ptsdyear_vghrsweek_n1i, m2i =
ptsdyear_vghrsweek_m2i, sd2i = ptsdyear_vghrsweek_sd2i, n2i =
ptsdyear_vghrsweek_n2i) #MA dataframe
ds1ptsdyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsdyear_meta) #Calculate
yi and vi

#Study 2
ptsdyear_yes_ds2_vghrsweek <- subset(ptsdyear_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
ptsdyear_vghrsweek_m1i <- apply(ptsdyear_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
ptsdyear_vghrsweek_sd1i <- apply(ptsdyear_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
ptsdyear_vghrsweek_n1i <- colSums(!is.na(ptsdyear_yes_ds2_vghrsweek))
#Calculate n1i
ptsdyear_no_ds2_vghrsweek <- subset(ptsdyear_no_ds2, select =
c(vghrsweek)) #Subset 2i data
ptsdyear_vghrsweek_m2i <- apply(ptsdyear_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
ptsdyear_vghrsweek_sd2i <- apply(ptsdyear_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
ptsdyear_vghrsweek_n2i <- colSums(!is.na(ptsdyear_no_ds2_vghrsweek))
#Calculate n2i
ds2ptsdyear_meta <- data.frame(m1i = ptsdyear_vghrsweek_m1i, sd1i =
ptsdyear_vghrsweek_sd1i, n1i = ptsdyear_vghrsweek_n1i, m2i =
ptsdyear_vghrsweek_m2i, sd2i = ptsdyear_vghrsweek_sd2i, n2i =
ptsdyear_vghrsweek_n2i) #MA dataframe
ds2ptsdyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsdyear_meta) #Calculate
yi and vi

#FE meta-analysis
(ptsdyear_meta <- rbind(ds1ptsdyear_meta, ds2ptsdyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi      vi
## 1 12.84000 13.26348  75 16.46753 17.04451  77 -3.6275  6.1185
## 2 22.54667 26.61876 150 22.70130 23.92261  77 -0.1546 12.1561

(ptsdyear_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=ptsdyear_meta))
```

```
##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.6600, p-val = 0.4166
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -2.4648   2.0174  -1.2217   0.2218  -6.4188   1.4893
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
ptsdyear_yes_ds1_vgdaysweek <- subset(ptsdyear_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
ptsdyear_vgdaysweek_m1i <- apply(ptsdyear_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
ptsdyear_vgdaysweek_sd1i <- apply(ptsdyear_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
ptsdyear_vgdaysweek_n1i <- colSums(!is.na(ptsdyear_yes_ds1_vgdaysweek))
#Calculate n1i
ptsdyear_no_ds1_vgdaysweek <- subset(ptsdyear_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
ptsdyear_vgdaysweek_m2i <- apply(ptsdyear_no_ds1_vgdaysweek, 2, mean)
#Calculate m2i
ptsdyear_vgdaysweek_sd2i <- apply(ptsdyear_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
ptsdyear_vgdaysweek_n2i <- colSums(!is.na(ptsdyear_no_ds1_vgdaysweek))
#Calculate n2i
ds1ptsdyear_meta <- data.frame(m1i = ptsdyear_vgdaysweek_m1i, sd1i =
ptsdyear_vgdaysweek_sd1i, n1i = ptsdyear_vgdaysweek_n1i, m2i =
ptsdyear_vgdaysweek_m2i, sd2i = ptsdyear_vgdaysweek_sd2i, n2i =
ptsdyear_vgdaysweek_n2i) #MA dataframe
ds1ptsdyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsdyear_meta) #Calculate
yi and vi

#Study 2
ptsdyear_yes_ds2_vgdaysweek <- subset(ptsdyear_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
ptsdyear_vgdaysweek_m1i <- apply(ptsdyear_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
ptsdyear_vgdaysweek_sd1i <- apply(ptsdyear_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
ptsdyear_vgdaysweek_n1i <- colSums(!is.na(ptsdyear_yes_ds2_vgdaysweek))
```

```r
#Calculate n1i
ptsdyear_no_ds2_vgdaysweek <- subset(ptsdyear_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
ptsdyear_vgdaysweek_m2i <- apply(ptsdyear_no_ds2_vgdaysweek, 2, mean)
#Calculate m2i
ptsdyear_vgdaysweek_sd2i <- apply(ptsdyear_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
ptsdyear_vgdaysweek_n2i <- colSums(!is.na(ptsdyear_no_ds2_vgdaysweek))
#Calculate n2i
ds2ptsdyear_meta <- data.frame(m1i = ptsdyear_vgdaysweek_m1i, sd1i =
ptsdyear_vgdaysweek_sd1i, n1i = ptsdyear_vgdaysweek_n1i, m2i =
ptsdyear_vgdaysweek_m2i, sd2i = ptsdyear_vgdaysweek_sd2i, n2i =
ptsdyear_vgdaysweek_n2i) #MA dataframe
ds2ptsdyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsdyear_meta) #Calculate
yi and vi

#FE meta-analysis
(ptsdyear_meta <- rbind(ds1ptsdyear_meta, ds2ptsdyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 5.226667 2.215262  75 5.090909 2.340613  77  0.1358 0.1366
## 2 5.006667 2.087022 150 5.051948 2.276286  77 -0.0453 0.0963

(ptsdyear_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=ptsdyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.1407, p-val = 0.7076
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0296   0.2377   0.1245   0.9009  -0.4362   0.4954
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

PTSD care - month

Replicated Effect

Hours per day

Study 1

```
(vghrsday_ptsdmonth_ds1 <- t.test(vghrsday ~ mhmonth, data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhmonth
## t = -1.2971, df = 38.121, p-value = 0.2024
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.4749509  0.3228772
## sample estimates:
## mean in group 0 mean in group 1
##        2.459677        3.035714
```

Study 2

```
(vghrsday_ptsdmonth_ds2 <- t.test(vghrsday ~ mhmonth, data=ds2ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhmonth
## t = 0.95147, df = 175.14, p-value = 0.3427
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4883524  1.3975426
## sample estimates:
## mean in group 0 mean in group 1
##        4.197452        3.742857
```

Hours per week

Study 1

```
(vghrsweek_ptsdmonth_ds1 <- t.test(vghrsweek ~ mhmonth, data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhmonth
## t = -1.0484, df = 38.484, p-value = 0.301
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -10.265701   3.258788
## sample estimates:
## mean in group 0 mean in group 1
##       14.03226       17.53571
```

Study 2

```
(vghrsweek_ptsdmonth_ds2 <- t.test(vghrsweek ~ mhmonth, data=ds2ptsd))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhmonth
## t = 1.6154, df = 174.39, p-value = 0.108
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.18153 11.83704
## sample estimates:
## mean in group 0 mean in group 1
##       24.24204       18.91429
```

Days per week

Study 1

```
(vgdaysweek_ptsdmonth_ds1 <- t.test(vgdaysweek ~ mhmonth,
data=ds1ptsd))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhmonth
## t = -0.8042, df = 41.002, p-value = 0.4259
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.3187332  0.5675812
## sample estimates:
## mean in group 0 mean in group 1
##       5.088710       5.464286
```

Study 2

```
(vgdaysweek_ptsdmonth_ds2 <- t.test(vgdaysweek ~ mhmonth,
data=ds2ptsd))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhmonth
## t = 1.1234, df = 137.24, p-value = 0.2632
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.2597604  0.9431089
## sample estimates:
## mean in group 0 mean in group 1
##        5.127389        4.785714
```

MD

Hours per day

```
#Study 1
ptsdmonth_yes_ds1_vghrsday <- subset(ptsdmonth_yes_ds1, select =
c(vghrsday)) #Subset 1i data
ptsdmonth_vghrsday_m1i <- apply(ptsdmonth_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
ptsdmonth_vghrsday_sd1i <- apply(ptsdmonth_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
ptsdmonth_vghrsday_n1i <- colSums(!is.na(ptsdmonth_yes_ds1_vghrsday))
#Calculate n1i
ptsdmonth_no_ds1_vghrsday <- subset(ptsdmonth_no_ds1, select =
c(vghrsday)) #Subset 2i data
ptsdmonth_vghrsday_m2i <- apply(ptsdmonth_no_ds1_vghrsday, 2, mean)
#Calculate m2i
ptsdmonth_vghrsday_sd2i <- apply(ptsdmonth_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
ptsdmonth_vghrsday_n2i <- colSums(!is.na(ptsdmonth_no_ds1_vghrsday))
#Calculate n2i
ds1ptsdmonth_meta <- data.frame(m1i = ptsdmonth_vghrsday_m1i, sd1i =
ptsdmonth_vghrsday_sd1i, n1i = ptsdmonth_vghrsday_n1i, m2i =
ptsdmonth_vghrsday_m2i, sd2i = ptsdmonth_vghrsday_sd2i, n2i =
ptsdmonth_vghrsday_n2i) #MA dataframe
ds1ptsdmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsdmonth_meta) #Calculate
yi and vi

#Study 2
ptsdmonth_yes_ds2_vghrsday <- subset(ptsdmonth_yes_ds2, select =
c(vghrsday)) #Subset 1i data
ptsdmonth_vghrsday_m1i <- apply(ptsdmonth_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
ptsdmonth_vghrsday_sd1i <- apply(ptsdmonth_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
ptsdmonth_vghrsday_n1i <- colSums(!is.na(ptsdmonth_yes_ds2_vghrsday))
```

```
#Calculate n1i
ptsdmonth_no_ds2_vghrsday <- subset(ptsdmonth_no_ds2, select =
c(vghrsday)) #Subset 2i data
ptsdmonth_vghrsday_m2i <- apply(ptsdmonth_no_ds2_vghrsday, 2, mean)
#Calculate m2i
ptsdmonth_vghrsday_sd2i <- apply(ptsdmonth_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
ptsdmonth_vghrsday_n2i <- colSums(!is.na(ptsdmonth_no_ds2_vghrsday))
#Calculate n2i
ds2ptsdmonth_meta <- data.frame(m1i = ptsdmonth_vghrsday_m1i, sd1i =
ptsdmonth_vghrsday_sd1i, n1i = ptsdmonth_vghrsday_n1i, m2i =
ptsdmonth_vghrsday_m2i, sd2i = ptsdmonth_vghrsday_sd2i, n2i =
ptsdmonth_vghrsday_n2i) #MA dataframe
ds2ptsdmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsdmonth_meta) #Calculate
yi and vi

#FE meta-analysis
(ptsdmonth_meta <- rbind(ds1ptsdmonth_meta, ds2ptsdmonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 3.035714 2.151350  28 2.459677 1.989400 124  0.5760 0.1972
## 2 3.742857 2.971779  70 4.197452 4.003908 157 -0.4546 0.2283

(ptsdmonth_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=ptsdmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.4964, p-val = 0.1141
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0983   0.3253   0.3023   0.7624  -0.5392   0.7359
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
ptsdmonth_yes_ds1_vghrsweek <- subset(ptsdmonth_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
ptsdmonth_vghrsweek_m1i <- apply(ptsdmonth_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
ptsdmonth_vghrsweek_sd1i <- apply(ptsdmonth_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
```

```r
ptsdmonth_vghrsweek_n1i <- colSums(!
is.na(ptsdmonth_yes_ds1_vghrsweek)) #Calculate n1i
ptsdmonth_no_ds1_vghrsweek <- subset(ptsdmonth_no_ds1, select =
c(vghrsweek)) #Subset 2i data
ptsdmonth_vghrsweek_m2i <- apply(ptsdmonth_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
ptsdmonth_vghrsweek_sd2i <- apply(ptsdmonth_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
ptsdmonth_vghrsweek_n2i <- colSums(!is.na(ptsdmonth_no_ds1_vghrsweek))
#Calculate n2i
ds1ptsdmonth_meta <- data.frame(m1i = ptsdmonth_vghrsweek_m1i, sd1i =
ptsdmonth_vghrsweek_sd1i, n1i = ptsdmonth_vghrsweek_n1i, m2i =
ptsdmonth_vghrsweek_m2i, sd2i = ptsdmonth_vghrsweek_sd2i, n2i =
ptsdmonth_vghrsweek_n2i) #MA dataframe
ds1ptsdmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsdmonth_meta) #Calculate
yi and vi

#Study 2
ptsdmonth_yes_ds2_vghrsweek <- subset(ptsdmonth_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
ptsdmonth_vghrsweek_m1i <- apply(ptsdmonth_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
ptsdmonth_vghrsweek_sd1i <- apply(ptsdmonth_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
ptsdmonth_vghrsweek_n1i <- colSums(!
is.na(ptsdmonth_yes_ds2_vghrsweek)) #Calculate n1i
ptsdmonth_no_ds2_vghrsweek <- subset(ptsdmonth_no_ds2, select =
c(vghrsweek)) #Subset 2i data
ptsdmonth_vghrsweek_m2i <- apply(ptsdmonth_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
ptsdmonth_vghrsweek_sd2i <- apply(ptsdmonth_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
ptsdmonth_vghrsweek_n2i <- colSums(!is.na(ptsdmonth_no_ds2_vghrsweek))
#Calculate n2i
ds2ptsdmonth_meta <- data.frame(m1i = ptsdmonth_vghrsweek_m1i, sd1i =
ptsdmonth_vghrsweek_sd1i, n1i = ptsdmonth_vghrsweek_n1i, m2i =
ptsdmonth_vghrsweek_m2i, sd2i = ptsdmonth_vghrsweek_sd2i, n2i =
ptsdmonth_vghrsweek_n2i) #MA dataframe
ds2ptsdmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsdmonth_meta) #Calculate
yi and vi

#FE meta-analysis
(ptsdmonth_meta <- rbind(ds1ptsdmonth_meta, ds2ptsdmonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi      vi
## 1 17.53571 16.14857  28 14.03226 15.16196 124  3.5035 11.1674
## 2 18.91429 20.55797  70 24.24204 27.56517 157 -5.3278 10.8773
```

```
(ptsdmonth_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=ptsdmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 3.5378, p-val = 0.0600
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.9702   2.3474  -0.4133   0.6794  -5.5710   3.6305
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
ptsdmonth_yes_ds1_vgdaysweek <- subset(ptsdmonth_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
ptsdmonth_vgdaysweek_m1i <- apply(ptsdmonth_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
ptsdmonth_vgdaysweek_sd1i <- apply(ptsdmonth_yes_ds1_vgdaysweek, 2,
sd) #Calculate sd1i
ptsdmonth_vgdaysweek_n1i <- colSums(!
is.na(ptsdmonth_yes_ds1_vgdaysweek)) #Calculate n1i
ptsdmonth_no_ds1_vgdaysweek <- subset(ptsdmonth_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
ptsdmonth_vgdaysweek_m2i <- apply(ptsdmonth_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
ptsdmonth_vgdaysweek_sd2i <- apply(ptsdmonth_no_ds1_vgdaysweek, 2,
sd) #Calculate sd2i
ptsdmonth_vgdaysweek_n2i <- colSums(!
is.na(ptsdmonth_no_ds1_vgdaysweek)) #Calculate n2i
ds1ptsdmonth_meta <- data.frame(m1i = ptsdmonth_vgdaysweek_m1i, sd1i
= ptsdmonth_vgdaysweek_sd1i, n1i = ptsdmonth_vgdaysweek_n1i, m2i =
ptsdmonth_vgdaysweek_m2i, sd2i = ptsdmonth_vgdaysweek_sd2i, n2i =
ptsdmonth_vgdaysweek_n2i) #MA dataframe
ds1ptsdmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1ptsdmonth_meta) #Calculate
yi and vi

#Study 2
ptsdmonth_yes_ds2_vgdaysweek <- subset(ptsdmonth_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
ptsdmonth_vgdaysweek_m1i <- apply(ptsdmonth_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
```

```r
ptsdmonth_vgdaysweek_sd1i <- apply(ptsdmonth_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
ptsdmonth_vgdaysweek_n1i <- colSums(!is.na(ptsdmonth_yes_ds2_vgdaysweek)) #Calculate n1i
ptsdmonth_no_ds2_vgdaysweek <- subset(ptsdmonth_no_ds2, select = c(vgdaysweek)) #Subset 2i data
ptsdmonth_vgdaysweek_m2i <- apply(ptsdmonth_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
ptsdmonth_vgdaysweek_sd2i <- apply(ptsdmonth_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
ptsdmonth_vgdaysweek_n2i <- colSums(!is.na(ptsdmonth_no_ds2_vgdaysweek)) #Calculate n2i
ds2ptsdmonth_meta <- data.frame(m1i = ptsdmonth_vgdaysweek_m1i, sd1i = ptsdmonth_vgdaysweek_sd1i, n1i = ptsdmonth_vgdaysweek_n1i, m2i = ptsdmonth_vgdaysweek_m2i, sd2i = ptsdmonth_vgdaysweek_sd2i, n2i = ptsdmonth_vgdaysweek_n2i) #MA dataframe
ds2ptsdmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2ptsdmonth_meta) #Calculate yi and vi

#FE meta-analysis
(ptsdmonth_meta <- rbind(ds1ptsdmonth_meta, ds2ptsdmonth_meta))

##       m1i     sd1i n1i     m2i     sd2i n2i      yi     vi
## 1 5.464286 2.219145  28 5.088710 2.288224 124  0.3756 0.2181
## 2 4.785714 2.091341  70 5.127389 2.171276 157 -0.3417 0.0925

(ptsdmonth_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE", data=ptsdmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 1.6562, p-val = 0.1981
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.1281   0.2549  -0.5024   0.6154  -0.6276   0.3715
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Depression care - discharge

Replicated Effect

Hours per day

Study 1

```
(vghrsday_depressiondis_ds1 <- t.test(vghrsday ~ mhdis,
data=ds1depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhdis
## t = 0.68063, df = 84.106, p-value = 0.498
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4493641  0.9170512
## sample estimates:
## mean in group 0 mean in group 1
##        2.775510        2.541667
```

Study 2

```
(vghrsday_depressiondis_ds2 <- t.test(vghrsday ~ mhdis,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhdis
## t = -2.3638, df = 179.93, p-value = 0.01916
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.6678833 -0.1501875
## sample estimates:
## mean in group 0 mean in group 1
##        3.206349        4.115385
```

Hours per week

Study 1

```
(vghrsweek_depressiondis_ds1 <- t.test(vghrsweek ~ mhdis,
data=ds1depression))

##
##  Welch Two Sample t-test
```

```
##
## data:  vghrsweek by mhdis
## t = 0.70153, df = 82.026, p-value = 0.485
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -3.378858  7.060150
## sample estimates:
## mean in group 0 mean in group 1
##        16.44898        14.60833
```

Study 2

```
(vghrsweek_depressiondis_ds2 <- t.test(vghrsweek ~ mhdis,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhdis
## t = -2.3401, df = 185.02, p-value = 0.02034
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -11.3229771  -0.9641109
## sample estimates:
## mean in group 0 mean in group 1
##        16.42857        22.57212
```

Days per week

Study 1

```
(vgdaysweek_depressiondis_ds1 <- t.test(vgdaysweek ~ mhdis,
data=ds1depression))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhdis
## t = -0.3834, df = 88.029, p-value = 0.7024
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.9022650  0.6104283
## sample estimates:
## mean in group 0 mean in group 1
##        5.204082        5.350000
```

Study 2

```
(vgdaysweek_depressiondis_ds2 <- t.test(vgdaysweek ~ mhdis,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhdis
## t = -0.81695, df = 95.151, p-value = 0.416
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.9239930  0.3852262
## sample estimates:
## mean in group 0 mean in group 1
##        4.682540        4.951923
```

MD

Hours per day

```
#Study 1
depressiondis_yes_ds1_vghrsday <- subset(depressiondis_yes_ds1, select =
c(vghrsday)) #Subset 1i data
depressiondis_vghrsday_m1i <- apply(depressiondis_yes_ds1_vghrsday, 2,
mean) #Calculate m1i
depressiondis_vghrsday_sd1i <- apply(depressiondis_yes_ds1_vghrsday, 2,
sd) #Calculate sd1i
depressiondis_vghrsday_n1i <- colSums(!
is.na(depressiondis_yes_ds1_vghrsday)) #Calculate n1i
depressiondis_no_ds1_vghrsday <- subset(depressiondis_no_ds1, select =
c(vghrsday)) #Subset 2i data
depressiondis_vghrsday_m2i <- apply(depressiondis_no_ds1_vghrsday, 2,
mean) #Calculate m2i
depressiondis_vghrsday_sd2i <- apply(depressiondis_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
depressiondis_vghrsday_n2i <- colSums(!
is.na(depressiondis_no_ds1_vghrsday)) #Calculate n2i
ds1depressiondis_meta <- data.frame(m1i = depressiondis_vghrsday_m1i,
sd1i = depressiondis_vghrsday_sd1i, n1i = depressiondis_vghrsday_n1i, m2i
= depressiondis_vghrsday_m2i, sd2i = depressiondis_vghrsday_sd2i, n2i =
depressiondis_vghrsday_n2i) #MA dataframe
ds1depressiondis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depressiondis_meta)
#Calculate yi and vi

#Study 2
depressiondis_yes_ds2_vghrsday <- subset(depressiondis_yes_ds2, select =
c(vghrsday)) #Subset 1i data
depressiondis_vghrsday_m1i <- apply(depressiondis_yes_ds2_vghrsday, 2,
```

```
mean) #Calculate m1i
depressiondis_vghrsday_sd1i <- apply(depressiondis_yes_ds2_vghrsday, 2,
sd) #Calculate sd1i
depressiondis_vghrsday_n1i <- colSums(!
is.na(depressiondis_yes_ds2_vghrsday)) #Calculate n1i
depressiondis_no_ds2_vghrsday <- subset(depressiondis_no_ds2, select =
c(vghrsday)) #Subset 2i data
depressiondis_vghrsday_m2i <- apply(depressiondis_no_ds2_vghrsday, 2,
mean) #Calculate m2i
depressiondis_vghrsday_sd2i <- apply(depressiondis_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
depressiondis_vghrsday_n2i <- colSums(!
is.na(depressiondis_no_ds2_vghrsday)) #Calculate n2i
ds2depressiondis_meta <- data.frame(m1i = depressiondis_vghrsday_m1i,
sd1i = depressiondis_vghrsday_sd1i, n1i = depressiondis_vghrsday_n1i, m2i
= depressiondis_vghrsday_m2i, sd2i = depressiondis_vghrsday_sd2i, n2i =
depressiondis_vghrsday_n2i) #MA dataframe
ds2depressiondis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depressiondis_meta)
#Calculate yi and vi

#FE meta-analysis
(depressiondis_meta <- rbind(ds1depressiondis_meta,
ds2depressiondis_meta))

##       m1i    sd1i n1i     m2i     sd2i n2i     yi     vi
## 1 2.541667 1.93115 120 2.775510 2.064232  49 -0.2338 0.1180
## 2 4.115385 3.81532 208 3.206349 2.215479  63  0.9090 0.1479

(depressiondis_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=depressiondis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 4.9117, p-val = 0.0267
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2734   0.2562   1.0672   0.2859  -0.2287   0.7756
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
depressiondis_yes_ds1_vghrsweek <- subset(depressiondis_yes_ds1, select =
```

```
c(vghrsweek)) #Subset 1i data
depressiondis_vghrsweek_m1i <- apply(depressiondis_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
depressiondis_vghrsweek_sd1i <- apply(depressiondis_yes_ds1_vghrsweek,
2, sd) #Calculate sd1i
depressiondis_vghrsweek_n1i <- colSums(!
is.na(depressiondis_yes_ds1_vghrsweek)) #Calculate n1i
depressiondis_no_ds1_vghrsweek <- subset(depressiondis_no_ds1, select =
c(vghrsweek)) #Subset 2i data
depressiondis_vghrsweek_m2i <- apply(depressiondis_no_ds1_vghrsweek, 2,
mean) #Calculate m2i
depressiondis_vghrsweek_sd2i <- apply(depressiondis_no_ds1_vghrsweek, 2,
sd) #Calculate sd2i
depressiondis_vghrsweek_n2i <- colSums(!
is.na(depressiondis_no_ds1_vghrsweek)) #Calculate n2i
ds1depressiondis_meta <- data.frame(m1i = depressiondis_vghrsweek_m1i,
sd1i = depressiondis_vghrsweek_sd1i, n1i = depressiondis_vghrsweek_n1i,
m2i = depressiondis_vghrsweek_m2i, sd2i = depressiondis_vghrsweek_sd2i,
n2i = depressiondis_vghrsweek_n2i) #MA dataframe
ds1depressiondis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depressiondis_meta)
#Calculate yi and vi

#Study 2
depressiondis_yes_ds2_vghrsweek <- subset(depressiondis_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
depressiondis_vghrsweek_m1i <- apply(depressiondis_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
depressiondis_vghrsweek_sd1i <- apply(depressiondis_yes_ds2_vghrsweek,
2, sd) #Calculate sd1i
depressiondis_vghrsweek_n1i <- colSums(!
is.na(depressiondis_yes_ds2_vghrsweek)) #Calculate n1i
depressiondis_no_ds2_vghrsweek <- subset(depressiondis_no_ds2, select =
c(vghrsweek)) #Subset 2i data
depressiondis_vghrsweek_m2i <- apply(depressiondis_no_ds2_vghrsweek, 2,
mean) #Calculate m2i
depressiondis_vghrsweek_sd2i <- apply(depressiondis_no_ds2_vghrsweek, 2,
sd) #Calculate sd2i
depressiondis_vghrsweek_n2i <- colSums(!
is.na(depressiondis_no_ds2_vghrsweek)) #Calculate n2i
ds2depressiondis_meta <- data.frame(m1i = depressiondis_vghrsweek_m1i,
sd1i = depressiondis_vghrsweek_sd1i, n1i = depressiondis_vghrsweek_n1i,
m2i = depressiondis_vghrsweek_m2i, sd2i = depressiondis_vghrsweek_sd2i,
n2i = depressiondis_vghrsweek_n2i) #MA dataframe
ds2depressiondis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depressiondis_meta)
#Calculate yi and vi

#FE meta-analysis
```

```
(depressiondis_meta <- rbind(ds1depressiondis_meta,
ds2depressiondis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 14.60833 14.42704 120 16.44898 15.88508  49 -1.8406 6.8842
## 2 22.57212 26.38995 208 16.42857 14.94259  63  6.1435 6.8924

(depressiondis_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=depressiondis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 4.6272, p-val = 0.0315
##
## Model Results:
##
## estimate      se    zval    pval    ci.lb    ci.ub
##   2.1491   1.8558   1.1580   0.2469  -1.4883   5.7865
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
depressiondis_yes_ds1_vgdaysweek <- subset(depressiondis_yes_ds1, select
= c(vgdaysweek)) #Subset 1i data
depressiondis_vgdaysweek_m1i <-
apply(depressiondis_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
depressiondis_vgdaysweek_sd1i <-
apply(depressiondis_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
depressiondis_vgdaysweek_n1i <- colSums(!
is.na(depressiondis_yes_ds1_vgdaysweek)) #Calculate n1i
depressiondis_no_ds1_vgdaysweek <- subset(depressiondis_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
depressiondis_vgdaysweek_m2i <- apply(depressiondis_no_ds1_vgdaysweek,
2, mean) #Calculate m2i
depressiondis_vgdaysweek_sd2i <- apply(depressiondis_no_ds1_vgdaysweek,
2, sd) #Calculate sd2i
depressiondis_vgdaysweek_n2i <- colSums(!
is.na(depressiondis_no_ds1_vgdaysweek)) #Calculate n2i
ds1depressiondis_meta <- data.frame(m1i = depressiondis_vgdaysweek_m1i,
sd1i = depressiondis_vgdaysweek_sd1i, n1i =
depressiondis_vgdaysweek_n1i, m2i = depressiondis_vgdaysweek_m2i, sd2i
= depressiondis_vgdaysweek_sd2i, n2i = depressiondis_vgdaysweek_n2i)
#MA dataframe
ds1depressiondis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depressiondis_meta)
```

```r
#Calculate yi and vi

#Study 2
depressiondis_yes_ds2_vgdaysweek <- subset(depressiondis_yes_ds2, select = c(vgdaysweek)) #Subset 1i data
depressiondis_vgdaysweek_m1i <- apply(depressiondis_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
depressiondis_vgdaysweek_sd1i <- apply(depressiondis_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
depressiondis_vgdaysweek_n1i <- colSums(!is.na(depressiondis_yes_ds2_vgdaysweek)) #Calculate n1i
depressiondis_no_ds2_vgdaysweek <- subset(depressiondis_no_ds2, select = c(vgdaysweek)) #Subset 2i data
depressiondis_vgdaysweek_m2i <- apply(depressiondis_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
depressiondis_vgdaysweek_sd2i <- apply(depressiondis_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
depressiondis_vgdaysweek_n2i <- colSums(!is.na(depressiondis_no_ds2_vgdaysweek)) #Calculate n2i
ds2depressiondis_meta <- data.frame(m1i = depressiondis_vgdaysweek_m1i, sd1i = depressiondis_vgdaysweek_sd1i, n1i = depressiondis_vgdaysweek_n1i, m2i = depressiondis_vgdaysweek_m2i, sd2i = depressiondis_vgdaysweek_sd2i, n2i = depressiondis_vgdaysweek_n2i)
#MA dataframe
ds2depressiondis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depressiondis_meta)
#Calculate yi and vi

#FE meta-analysis
(depressiondis_meta <- rbind(ds1depressiondis_meta, ds2depressiondis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.350000 2.221552 120 5.204082 2.254436  49 0.1459 0.1449
## 2 4.951923 2.128163 208 4.682540 2.340564  63 0.2694 0.1087

(depressiondis_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE", data=depressiondis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.0601, p-val = 0.8063
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2164   0.2492   0.8685   0.3851  -0.2720   0.7049
##
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Depression care - year

Replicated Effect

Hours per day

Study 1

```
(vghrsday_depressionyear_ds1 <- t.test(vghrsday ~ mhyear,
data=ds1depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhyear
## t = 1.37, df = 166.67, p-value = 0.1725
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.1816303  1.0051432
## sample estimates:
## mean in group 0 mean in group 1
##        2.806818        2.395062
```

Study 2

```
(vghrsday_depressionyear_ds2 <- t.test(vghrsday ~ mhyear,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhyear
## t = -1.1833, df = 258.01, p-value = 0.2378
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.313930  0.327538
## sample estimates:
## mean in group 0 mean in group 1
##        3.603774        4.096970
```

Hours per week

Study 1

```
(vghrsweek_depressionyear_ds1 <- t.test(vghrsweek ~ mhyear,
data=ds1depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhyear
## t = 1.378, df = 165.58, p-value = 0.1701
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.34943  7.58512
## sample estimates:
## mean in group 0 mean in group 1
##       16.63636       13.51852
```

Study 2

```
(vghrsweek_depressionyear_ds2 <- t.test(vghrsweek ~ mhyear,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhyear
## t = -0.92386, df = 252.8, p-value = 0.3564
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -8.407068  3.038057
## sample estimates:
## mean in group 0 mean in group 1
##       19.50943       22.19394
```

Days per week

Study 1

```
(vgdaysweek_depressionyear_ds1 <- t.test(vgdaysweek ~ mhyear,
data=ds1depression))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhyear
## t = -0.14358, df = 166.81, p-value = 0.886
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
```

```
##  -0.7263392  0.6278543
## sample estimates:
## mean in group 0 mean in group 1
##       5.284091       5.333333
```

Study 2

```
(vgdaysweek_depressionyear_ds2 <- t.test(vgdaysweek ~ mhyear,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhyear
## t = -0.4071, df = 210.3, p-value = 0.6843
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6577168  0.4325596
## sample estimates:
## mean in group 0 mean in group 1
##       4.820755       4.933333
```

MD

Hours per day

```
#Study 1
depressionyear_yes_ds1_vghrsday <- subset(depressionyear_yes_ds1, select
= c(vghrsday)) #Subset 1i data
depressionyear_vghrsday_m1i <- apply(depressionyear_yes_ds1_vghrsday, 2,
mean) #Calculate m1i
depressionyear_vghrsday_sd1i <- apply(depressionyear_yes_ds1_vghrsday,
2, sd) #Calculate sd1i
depressionyear_vghrsday_n1i <- colSums(!
is.na(depressionyear_yes_ds1_vghrsday)) #Calculate n1i
depressionyear_no_ds1_vghrsday <- subset(depressionyear_no_ds1, select =
c(vghrsday)) #Subset 2i data
depressionyear_vghrsday_m2i <- apply(depressionyear_no_ds1_vghrsday, 2,
mean) #Calculate m2i
depressionyear_vghrsday_sd2i <- apply(depressionyear_no_ds1_vghrsday, 2,
sd) #Calculate sd2i
depressionyear_vghrsday_n2i <- colSums(!
is.na(depressionyear_no_ds1_vghrsday)) #Calculate n2i
ds1depressionyear_meta <- data.frame(m1i = depressionyear_vghrsday_m1i,
sd1i = depressionyear_vghrsday_sd1i, n1i = depressionyear_vghrsday_n1i,
m2i = depressionyear_vghrsday_m2i, sd2i = depressionyear_vghrsday_sd2i,
n2i = depressionyear_vghrsday_n2i) #MA dataframe
ds1depressionyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
```

```
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depressionyear_meta)
#Calculate yi and vi

#Study 2
depressionyear_yes_ds2_vghrsday <- subset(depressionyear_yes_ds2, select
= c(vghrsday)) #Subset 1i data
depressionyear_vghrsday_m1i <- apply(depressionyear_yes_ds2_vghrsday, 2,
mean) #Calculate m1i
depressionyear_vghrsday_sd1i <- apply(depressionyear_yes_ds2_vghrsday,
2, sd) #Calculate sd1i
depressionyear_vghrsday_n1i <- colSums(!
is.na(depressionyear_yes_ds2_vghrsday)) #Calculate n1i
depressionyear_no_ds2_vghrsday <- subset(depressionyear_no_ds2, select =
c(vghrsday)) #Subset 2i data
depressionyear_vghrsday_m2i <- apply(depressionyear_no_ds2_vghrsday, 2,
mean) #Calculate m2i
depressionyear_vghrsday_sd2i <- apply(depressionyear_no_ds2_vghrsday, 2,
sd) #Calculate sd2i
depressionyear_vghrsday_n2i <- colSums(!
is.na(depressionyear_no_ds2_vghrsday)) #Calculate n2i
ds2depressionyear_meta <- data.frame(m1i = depressionyear_vghrsday_m1i,
sd1i = depressionyear_vghrsday_sd1i, n1i = depressionyear_vghrsday_n1i,
m2i = depressionyear_vghrsday_m2i, sd2i = depressionyear_vghrsday_sd2i,
n2i = depressionyear_vghrsday_n2i) #MA dataframe
ds2depressionyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depressionyear_meta)
#Calculate yi and vi

#FE meta-analysis
(depressionyear_meta <- rbind(ds1depressionyear_meta,
ds2depressionyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.395062 1.828107  81 2.806818 2.078118  88 -0.4118 0.0903
## 2 4.096970 3.819437 165 3.603774 3.006910 106  0.4932 0.1737

(depressionyear_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=depressionyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 3.1015, p-val = 0.0782
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.1022   0.2438  -0.4191   0.6752  -0.5800   0.3756
##
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
depressionyear_yes_ds1_vghrsweek <- subset(depressionyear_yes_ds1,
select = c(vghrsweek)) #Subset 1i data
depressionyear_vghrsweek_m1i <-
apply(depressionyear_yes_ds1_vghrsweek, 2, mean) #Calculate m1i
depressionyear_vghrsweek_sd1i <-
apply(depressionyear_yes_ds1_vghrsweek, 2, sd) #Calculate sd1i
depressionyear_vghrsweek_n1i <- colSums(!
is.na(depressionyear_yes_ds1_vghrsweek)) #Calculate n1i
depressionyear_no_ds1_vghrsweek <- subset(depressionyear_no_ds1, select
= c(vghrsweek)) #Subset 2i data
depressionyear_vghrsweek_m2i <- apply(depressionyear_no_ds1_vghrsweek,
2, mean) #Calculate m2i
depressionyear_vghrsweek_sd2i <- apply(depressionyear_no_ds1_vghrsweek,
2, sd) #Calculate sd2i
depressionyear_vghrsweek_n2i <- colSums(!
is.na(depressionyear_no_ds1_vghrsweek)) #Calculate n2i
ds1depressionyear_meta <- data.frame(m1i =
depressionyear_vghrsweek_m1i, sd1i = depressionyear_vghrsweek_sd1i, n1i
= depressionyear_vghrsweek_n1i, m2i = depressionyear_vghrsweek_m2i,
sd2i = depressionyear_vghrsweek_sd2i, n2i =
depressionyear_vghrsweek_n2i) #MA dataframe
ds1depressionyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depressionyear_meta)
#Calculate yi and vi

#Study 2
depressionyear_yes_ds2_vghrsweek <- subset(depressionyear_yes_ds2,
select = c(vghrsweek)) #Subset 1i data
depressionyear_vghrsweek_m1i <-
apply(depressionyear_yes_ds2_vghrsweek, 2, mean) #Calculate m1i
depressionyear_vghrsweek_sd1i <-
apply(depressionyear_yes_ds2_vghrsweek, 2, sd) #Calculate sd1i
depressionyear_vghrsweek_n1i <- colSums(!
is.na(depressionyear_yes_ds2_vghrsweek)) #Calculate n1i
depressionyear_no_ds2_vghrsweek <- subset(depressionyear_no_ds2, select
= c(vghrsweek)) #Subset 2i data
depressionyear_vghrsweek_m2i <- apply(depressionyear_no_ds2_vghrsweek,
2, mean) #Calculate m2i
depressionyear_vghrsweek_sd2i <- apply(depressionyear_no_ds2_vghrsweek,
2, sd) #Calculate sd2i
depressionyear_vghrsweek_n2i <- colSums(!
is.na(depressionyear_no_ds2_vghrsweek)) #Calculate n2i
ds2depressionyear_meta <- data.frame(m1i =
```

```
depressionyear_vghrsweek_m1i, sd1i = depressionyear_vghrsweek_sd1i, n1i
= depressionyear_vghrsweek_n1i, m2i = depressionyear_vghrsweek_m2i,
sd2i = depressionyear_vghrsweek_sd2i, n2i =
depressionyear_vghrsweek_n2i) #MA dataframe
ds2depressionyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depressionyear_meta)
#Calculate yi and vi

#FE meta-analysis
(depressionyear_meta <- rbind(ds1depressionyear_meta,
ds2depressionyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 13.51852 13.39600  81 16.63636 15.98576  88 -3.1178 5.1194
## 2 22.19394 26.02482 165 19.50943 21.44506 106  2.6845 8.4434

(depressionyear_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=depressionyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.4823, p-val = 0.1151
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.9277   1.7852  -0.5197   0.6033  -4.4267   2.5713
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
depressionyear_yes_ds1_vgdaysweek <- subset(depressionyear_yes_ds1,
select = c(vgdaysweek)) #Subset 1i data
depressionyear_vgdaysweek_m1i <-
apply(depressionyear_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
depressionyear_vgdaysweek_sd1i <-
apply(depressionyear_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
depressionyear_vgdaysweek_n1i <- colSums(!
is.na(depressionyear_yes_ds1_vgdaysweek)) #Calculate n1i
depressionyear_no_ds1_vgdaysweek <- subset(depressionyear_no_ds1,
select = c(vgdaysweek)) #Subset 2i data
depressionyear_vgdaysweek_m2i <-
apply(depressionyear_no_ds1_vgdaysweek, 2, mean) #Calculate m2i
depressionyear_vgdaysweek_sd2i <-
apply(depressionyear_no_ds1_vgdaysweek, 2, sd) #Calculate sd2i
```

```r
depressionyear_vgdaysweek_n2i <- colSums(!
is.na(depressionyear_no_ds1_vgdaysweek)) #Calculate n2i
ds1depressionyear_meta <- data.frame(m1i =
depressionyear_vgdaysweek_m1i, sd1i = depressionyear_vgdaysweek_sd1i,
n1i = depressionyear_vgdaysweek_n1i, m2i =
depressionyear_vgdaysweek_m2i, sd2i = depressionyear_vgdaysweek_sd2i,
n2i = depressionyear_vgdaysweek_n2i) #MA dataframe
ds1depressionyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1depressionyear_meta)
#Calculate yi and vi

#Study 2
depressionyear_yes_ds2_vgdaysweek <- subset(depressionyear_yes_ds2,
select = c(vgdaysweek)) #Subset 1i data
depressionyear_vgdaysweek_m1i <-
apply(depressionyear_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
depressionyear_vgdaysweek_sd1i <-
apply(depressionyear_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
depressionyear_vgdaysweek_n1i <- colSums(!
is.na(depressionyear_yes_ds2_vgdaysweek)) #Calculate n1i
depressionyear_no_ds2_vgdaysweek <- subset(depressionyear_no_ds2,
select = c(vgdaysweek)) #Subset 2i data
depressionyear_vgdaysweek_m2i <-
apply(depressionyear_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
depressionyear_vgdaysweek_sd2i <-
apply(depressionyear_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
depressionyear_vgdaysweek_n2i <- colSums(!
is.na(depressionyear_no_ds2_vgdaysweek)) #Calculate n2i
ds2depressionyear_meta <- data.frame(m1i =
depressionyear_vgdaysweek_m1i, sd1i = depressionyear_vgdaysweek_sd1i,
n1i = depressionyear_vgdaysweek_n1i, m2i =
depressionyear_vgdaysweek_m2i, sd2i = depressionyear_vgdaysweek_sd2i,
n2i = depressionyear_vgdaysweek_n2i) #MA dataframe
ds2depressionyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2depressionyear_meta)
#Calculate yi and vi

#FE meta-analysis
(depressionyear_meta <- rbind(ds1depressionyear_meta,
ds2depressionyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.333333 2.173707  81 5.284091 2.284122  88 0.0492 0.1176
## 2 4.933333 2.107285 165 4.820755 2.292003 106 0.1126 0.0765

(depressionyear_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=depressionyear_meta))

##
## Fixed-Effects Model (k = 2)
##
```

```
## Test for Heterogeneity:
## Q(df = 1) = 0.0207, p-val = 0.8857
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0876   0.2153   0.4070   0.6840  -0.3343   0.5096
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Depression care - month

Replicated Effect

Hours per day

Study 1

```
(vghrsday_depressionmonth_ds1 <- t.test(vghrsday ~ mhmonth,
data=ds1depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhmonth
## t = -1.4666, df = 38.807, p-value = 0.1505
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.5155007  0.2416398
## sample estimates:
## mean in group 0 mean in group 1
##        2.496403        3.133333
```

Study 2

```
(vghrsday_depressionmonth_ds2 <- t.test(vghrsday ~ mhmonth,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by mhmonth
## t = 0.70652, df = 154.02, p-value = 0.4809
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5548928  1.1727801
```

```
## sample estimates:
## mean in group 0 mean in group 1
##       3.985000       3.676056
```

Hours per week

Study 1

```
(vghrsweek_depressionmonth_ds1 <- t.test(vghrsweek ~ mhmonth,
data=ds1depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhmonth
## t = -1.2268, df = 39.024, p-value = 0.2272
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -10.59930   2.59594
## sample estimates:
## mean in group 0 mean in group 1
##       14.43165       18.43333
```

Study 2

```
(vghrsweek_depressionmonth_ds2 <- t.test(vghrsweek ~ mhmonth,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by mhmonth
## t = 1.0685, df = 155.14, p-value = 0.287
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.724875  9.145579
## sample estimates:
## mean in group 0 mean in group 1
##       21.98500       18.77465
```

Days per week

Study 1

```
(vgdaysweek_depressionmonth_ds1 <- t.test(vgdaysweek ~ mhmonth,
data=ds1depression))
```

```
##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhmonth
## t = -0.71491, df = 43.295, p-value = 0.4785
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.2029034  0.5731672
## sample estimates:
## mean in group 0 mean in group 1
##       5.251799       5.566667
```

Study 2

```
(vgdaysweek_depressionmonth_ds2 <- t.test(vgdaysweek ~ mhmonth,
data=ds2depression))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by mhmonth
## t = 0.074803, df = 131.7, p-value = 0.9405
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5536870  0.5972082
## sample estimates:
## mean in group 0 mean in group 1
##       4.895000       4.873239
```

MD

Hours per day

```
#Study 1
depressionmonth_yes_ds1_vghrsday <- subset(depressionmonth_yes_ds1,
select = c(vghrsday)) #Subset 1i data
depressionmonth_vghrsday_m1i <-
apply(depressionmonth_yes_ds1_vghrsday, 2, mean) #Calculate m1i
depressionmonth_vghrsday_sd1i <-
apply(depressionmonth_yes_ds1_vghrsday, 2, sd) #Calculate sd1i
depressionmonth_vghrsday_n1i <- colSums(!
is.na(depressionmonth_yes_ds1_vghrsday)) #Calculate n1i
depressionmonth_no_ds1_vghrsday <- subset(depressionmonth_no_ds1,
select = c(vghrsday)) #Subset 2i data
depressionmonth_vghrsday_m2i <-
apply(depressionmonth_no_ds1_vghrsday, 2, mean) #Calculate m2i
depressionmonth_vghrsday_sd2i <-
apply(depressionmonth_no_ds1_vghrsday, 2, sd) #Calculate sd2i
```

```
depressionmonth_vghrsday_n2i <- colSums(!
is.na(depressionmonth_no_ds1_vghrsday)) #Calculate n2i
ds1depressionmonth_meta <- data.frame(m1i =
depressionmonth_vghrsday_m1i, sd1i = depressionmonth_vghrsday_sd1i, n1i
= depressionmonth_vghrsday_n1i, m2i = depressionmonth_vghrsday_m2i,
sd2i = depressionmonth_vghrsday_sd2i, n2i =
depressionmonth_vghrsday_n2i) #MA dataframe
ds1depressionmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1depressionmonth_meta) #Calculate yi and vi

#Study 2
depressionmonth_yes_ds2_vghrsday <- subset(depressionmonth_yes_ds2,
select = c(vghrsday)) #Subset 1i data
depressionmonth_vghrsday_m1i <-
apply(depressionmonth_yes_ds2_vghrsday, 2, mean) #Calculate m1i
depressionmonth_vghrsday_sd1i <-
apply(depressionmonth_yes_ds2_vghrsday, 2, sd) #Calculate sd1i
depressionmonth_vghrsday_n1i <- colSums(!
is.na(depressionmonth_yes_ds2_vghrsday)) #Calculate n1i
depressionmonth_no_ds2_vghrsday <- subset(depressionmonth_no_ds2,
select = c(vghrsday)) #Subset 2i data
depressionmonth_vghrsday_m2i <-
apply(depressionmonth_no_ds2_vghrsday, 2, mean) #Calculate m2i
depressionmonth_vghrsday_sd2i <-
apply(depressionmonth_no_ds2_vghrsday, 2, sd) #Calculate sd2i
depressionmonth_vghrsday_n2i <- colSums(!
is.na(depressionmonth_no_ds2_vghrsday)) #Calculate n2i
ds2depressionmonth_meta <- data.frame(m1i =
depressionmonth_vghrsday_m1i, sd1i = depressionmonth_vghrsday_sd1i, n1i
= depressionmonth_vghrsday_n1i, m2i = depressionmonth_vghrsday_m2i,
sd2i = depressionmonth_vghrsday_sd2i, n2i =
depressionmonth_vghrsday_n2i) #MA dataframe
ds2depressionmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2depressionmonth_meta) #Calculate yi and vi

#FE meta-analysis
(depressionmonth_meta <- rbind(ds1depressionmonth_meta,
ds2depressionmonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 3.133333 2.208656  30 2.496403 1.901083 139  0.6369 0.1886
## 2 3.676056 2.946061  71 3.985000 3.713993 200 -0.3089 0.1912

(depressionmonth_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=depressionmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
```

```
## Test for Heterogeneity:
## Q(df = 1) = 2.3555, p-val = 0.1248
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.1672   0.3081   0.5427   0.5873  -0.4367   0.7712
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
depressionmonth_yes_ds1_vghrsweek <- subset(depressionmonth_yes_ds1,
select = c(vghrsweek)) #Subset 1i data
depressionmonth_vghrsweek_m1i <-
apply(depressionmonth_yes_ds1_vghrsweek, 2, mean) #Calculate m1i
depressionmonth_vghrsweek_sd1i <-
apply(depressionmonth_yes_ds1_vghrsweek, 2, sd) #Calculate sd1i
depressionmonth_vghrsweek_n1i <- colSums(!
is.na(depressionmonth_yes_ds1_vghrsweek)) #Calculate n1i
depressionmonth_no_ds1_vghrsweek <- subset(depressionmonth_no_ds1,
select = c(vghrsweek)) #Subset 2i data
depressionmonth_vghrsweek_m2i <-
apply(depressionmonth_no_ds1_vghrsweek, 2, mean) #Calculate m2i
depressionmonth_vghrsweek_sd2i <-
apply(depressionmonth_no_ds1_vghrsweek, 2, sd) #Calculate sd2i
depressionmonth_vghrsweek_n2i <- colSums(!
is.na(depressionmonth_no_ds1_vghrsweek)) #Calculate n2i
ds1depressionmonth_meta <- data.frame(m1i =
depressionmonth_vghrsweek_m1i, sd1i = depressionmonth_vghrsweek_sd1i,
n1i = depressionmonth_vghrsweek_n1i, m2i =
depressionmonth_vghrsweek_m2i, sd2i = depressionmonth_vghrsweek_sd2i,
n2i = depressionmonth_vghrsweek_n2i) #MA dataframe
ds1depressionmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1depressionmonth_meta) #Calculate yi and vi

#Study 2
depressionmonth_yes_ds2_vghrsweek <- subset(depressionmonth_yes_ds2,
select = c(vghrsweek)) #Subset 1i data
depressionmonth_vghrsweek_m1i <-
apply(depressionmonth_yes_ds2_vghrsweek, 2, mean) #Calculate m1i
depressionmonth_vghrsweek_sd1i <-
apply(depressionmonth_yes_ds2_vghrsweek, 2, sd) #Calculate sd1i
depressionmonth_vghrsweek_n1i <- colSums(!
is.na(depressionmonth_yes_ds2_vghrsweek)) #Calculate n1i
depressionmonth_no_ds2_vghrsweek <- subset(depressionmonth_no_ds2,
```

```
select = c(vghrsweek)) #Subset 2i data
depressionmonth_vghrsweek_m2i <-
apply(depressionmonth_no_ds2_vghrsweek, 2, mean) #Calculate m2i
depressionmonth_vghrsweek_sd2i <-
apply(depressionmonth_no_ds2_vghrsweek, 2, sd) #Calculate sd2i
depressionmonth_vghrsweek_n2i <- colSums(!
is.na(depressionmonth_no_ds2_vghrsweek)) #Calculate n2i
ds2depressionmonth_meta <- data.frame(m1i =
depressionmonth_vghrsweek_m1i, sd1i = depressionmonth_vghrsweek_sd1i,
n1i = depressionmonth_vghrsweek_n1i, m2i =
depressionmonth_vghrsweek_m2i, sd2i = depressionmonth_vghrsweek_sd2i,
n2i = depressionmonth_vghrsweek_n2i) #MA dataframe
ds2depressionmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2depressionmonth_meta) #Calculate yi and vi

#FE meta-analysis
(depressionmonth_meta <- rbind(ds1depressionmonth_meta,
ds2depressionmonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi      vi
## 1 18.43333 16.56478  30 14.43165 14.40765 139  4.0017 10.6398
## 2 18.77465 20.19208  71 21.98500 25.63259 200 -3.2104  9.0277

(depressionmonth_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=depressionmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.6446, p-val = 0.1039
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.1001   2.2099   0.0453   0.9639  -4.2313   4.4315
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
depressionmonth_yes_ds1_vgdaysweek <- subset(depressionmonth_yes_ds1,
select = c(vgdaysweek)) #Subset 1i data
depressionmonth_vgdaysweek_m1i <-
apply(depressionmonth_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
depressionmonth_vgdaysweek_sd1i <-
apply(depressionmonth_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
```

```
depressionmonth_vgdaysweek_n1i <- colSums(!
is.na(depressionmonth_yes_ds1_vgdaysweek)) #Calculate n1i
depressionmonth_no_ds1_vgdaysweek <- subset(depressionmonth_no_ds1,
select = c(vgdaysweek)) #Subset 2i data
depressionmonth_vgdaysweek_m2i <-
apply(depressionmonth_no_ds1_vgdaysweek, 2, mean) #Calculate m2i
depressionmonth_vgdaysweek_sd2i <-
apply(depressionmonth_no_ds1_vgdaysweek, 2, sd) #Calculate sd2i
depressionmonth_vgdaysweek_n2i <- colSums(!
is.na(depressionmonth_no_ds1_vgdaysweek)) #Calculate n2i
ds1depressionmonth_meta <- data.frame(m1i =
depressionmonth_vgdaysweek_m1i, sd1i =
depressionmonth_vgdaysweek_sd1i, n1i =
depressionmonth_vgdaysweek_n1i, m2i =
depressionmonth_vgdaysweek_m2i, sd2i =
depressionmonth_vgdaysweek_sd2i, n2i =
depressionmonth_vgdaysweek_n2i) #MA dataframe
ds1depressionmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1depressionmonth_meta) #Calculate yi and vi

#Study 2
depressionmonth_yes_ds2_vgdaysweek <- subset(depressionmonth_yes_ds2,
select = c(vgdaysweek)) #Subset 1i data
depressionmonth_vgdaysweek_m1i <-
apply(depressionmonth_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
depressionmonth_vgdaysweek_sd1i <-
apply(depressionmonth_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
depressionmonth_vgdaysweek_n1i <- colSums(!
is.na(depressionmonth_yes_ds2_vgdaysweek)) #Calculate n1i
depressionmonth_no_ds2_vgdaysweek <- subset(depressionmonth_no_ds2,
select = c(vgdaysweek)) #Subset 2i data
depressionmonth_vgdaysweek_m2i <-
apply(depressionmonth_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
depressionmonth_vgdaysweek_sd2i <-
apply(depressionmonth_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
depressionmonth_vgdaysweek_n2i <- colSums(!
is.na(depressionmonth_no_ds2_vgdaysweek)) #Calculate n2i
ds2depressionmonth_meta <- data.frame(m1i =
depressionmonth_vgdaysweek_m1i, sd1i =
depressionmonth_vgdaysweek_sd1i, n1i =
depressionmonth_vgdaysweek_n1i, m2i =
depressionmonth_vgdaysweek_m2i, sd2i =
depressionmonth_vgdaysweek_sd2i, n2i =
depressionmonth_vgdaysweek_n2i) #MA dataframe
ds2depressionmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2depressionmonth_meta) #Calculate yi and vi

#FE meta-analysis
```

```
(depressionmonth_meta <- rbind(ds1depressionmonth_meta,
ds2depressionmonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 5.566667 2.176415  30 5.251799 2.239609 139  0.3149 0.1940
## 2 4.873239 2.062797  71 4.895000 2.222311 200 -0.0218 0.0846

(depressionmonth_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=depressionmonth_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.4067, p-val = 0.5236
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0805   0.2427   0.3316   0.7402  -0.3953   0.5562
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Any SUD - discharge

Replicated Effect

Hours per day

Study 1

```
(vghrsday_anysudscreendis_ds1 <- t.test(vghrsday ~ alcsuddis,
data=ds1anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsuddis
## t = -1.3424, df = 58.109, p-value = 0.1847
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.0248867  0.2020385
## sample estimates:
## mean in group 0 mean in group 1
##       2.077465       2.488889
```

Study 2

```
(vghrsday_anysudscreendis_ds2 <- t.test(vghrsday ~ alcsuddis,
data=ds2anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsuddis
## t = 0.98905, df = 132.12, p-value = 0.3244
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.371894  1.115702
## sample estimates:
## mean in group 0 mean in group 1
##        3.660793        3.288889
```

Hours per week

Study 1

```
(vghrsweek_anysudscreendis_ds1 <- t.test(vghrsweek ~ alcsuddis,
data=ds1anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsuddis
## t = -2.1523, df = 59.465, p-value = 0.03544
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -9.2333783 -0.3372008
## sample estimates:
## mean in group 0 mean in group 1
##        10.85915        15.64444
```

Study 2

```
(vghrsweek_anysudscreendis_ds2 <- t.test(vghrsweek ~ alcsuddis,
data=ds2anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsuddis
## t = 0.94109, df = 143.29, p-value = 0.3482
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.518879  7.097048
## sample estimates:
```

```
## mean in group 0 mean in group 1
##       18.97797       16.68889
```

Days per week

Study 1

```
(vgdaysweek_anysudscreendis_ds1 <- t.test(vgdaysweek ~ alcsuddis,
data=ds1anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsuddis
## t = -3.4102, df = 93.98, p-value = 0.0009583
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.7570534 -0.4639169
## sample estimates:
## mean in group 0 mean in group 1
##       4.845070       5.955556
```

Study 2

```
(vgdaysweek_anysudscreendis_ds2 <- t.test(vgdaysweek ~ alcsuddis,
data=ds2anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsuddis
## t = -0.95005, df = 65.057, p-value = 0.3456
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.0249259  0.3641329
## sample estimates:
## mean in group 0 mean in group 1
##       4.669604       5.000000
```

MD

Hours per day

```
#Study 1
anysudscreendis_yes_ds1_vghrsday <- subset(anysudscreendis_yes_ds1,
select = c(vghrsday)) #Subset 1i data
anysudscreendis_vghrsday_m1i <- apply(anysudscreendis_yes_ds1_vghrsday,
2, mean) #Calculate m1i
```

```
anysudscreendis_vghrsday_sd1i <-
apply(anysudscreendis_yes_ds1_vghrsday, 2, sd) #Calculate sd1i
anysudscreendis_vghrsday_n1i <- colSums(!
is.na(anysudscreendis_yes_ds1_vghrsday)) #Calculate n1i
anysudscreendis_no_ds1_vghrsday <- subset(anysudscreendis_no_ds1, select
= c(vghrsday)) #Subset 2i data
anysudscreendis_vghrsday_m2i <- apply(anysudscreendis_no_ds1_vghrsday,
2, mean) #Calculate m2i
anysudscreendis_vghrsday_sd2i <- apply(anysudscreendis_no_ds1_vghrsday,
2, sd) #Calculate sd2i
anysudscreendis_vghrsday_n2i <- colSums(!
is.na(anysudscreendis_no_ds1_vghrsday)) #Calculate n2i
ds1anysudscreendis_meta <- data.frame(m1i =
anysudscreendis_vghrsday_m1i, sd1i = anysudscreendis_vghrsday_sd1i, n1i
= anysudscreendis_vghrsday_n1i, m2i = anysudscreendis_vghrsday_m2i,
sd2i = anysudscreendis_vghrsday_sd2i, n2i = anysudscreendis_vghrsday_n2i)
#MA dataframe
ds1anysudscreendis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1anysudscreendis_meta) #Calculate yi and vi

#Study 2
anysudscreendis_yes_ds2_vghrsday <- subset(anysudscreendis_yes_ds2,
select = c(vghrsday)) #Subset 1i data
anysudscreendis_vghrsday_m1i <- apply(anysudscreendis_yes_ds2_vghrsday,
2, mean) #Calculate m1i
anysudscreendis_vghrsday_sd1i <-
apply(anysudscreendis_yes_ds2_vghrsday, 2, sd) #Calculate sd1i
anysudscreendis_vghrsday_n1i <- colSums(!
is.na(anysudscreendis_yes_ds2_vghrsday)) #Calculate n1i
anysudscreendis_no_ds2_vghrsday <- subset(anysudscreendis_no_ds2, select
= c(vghrsday)) #Subset 2i data
anysudscreendis_vghrsday_m2i <- apply(anysudscreendis_no_ds2_vghrsday,
2, mean) #Calculate m2i
anysudscreendis_vghrsday_sd2i <- apply(anysudscreendis_no_ds2_vghrsday,
2, sd) #Calculate sd2i
anysudscreendis_vghrsday_n2i <- colSums(!
is.na(anysudscreendis_no_ds2_vghrsday)) #Calculate n2i
ds2anysudscreendis_meta <- data.frame(m1i =
anysudscreendis_vghrsday_m1i, sd1i = anysudscreendis_vghrsday_sd1i, n1i
= anysudscreendis_vghrsday_n1i, m2i = anysudscreendis_vghrsday_m2i,
sd2i = anysudscreendis_vghrsday_sd2i, n2i = anysudscreendis_vghrsday_n2i)
#MA dataframe
ds2anysudscreendis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreendis_meta) #Calculate yi and vi

#FE meta-analysis
(anysudscreendis_meta <- rbind(ds1anysudscreendis_meta,
ds2anysudscreendis_meta))
```

```
##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.488889 1.914327  45 2.077465 1.331953 142  0.4114 0.0939
## 2 3.288889 1.854016  45 3.660793 3.841368 227 -0.3719 0.1414

(anysudscreendis_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreendis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.6075, p-val = 0.1064
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0988   0.2376   0.4157   0.6776  -0.3669   0.5644
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
anysudscreendis_yes_ds1_vghrsweek <- subset(anysudscreendis_yes_ds1,
select = c(vghrsweek)) #Subset 1i data
anysudscreendis_vghrsweek_m1i <-
apply(anysudscreendis_yes_ds1_vghrsweek, 2, mean) #Calculate m1i
anysudscreendis_vghrsweek_sd1i <-
apply(anysudscreendis_yes_ds1_vghrsweek, 2, sd) #Calculate sd1i
anysudscreendis_vghrsweek_n1i <- colSums(!
is.na(anysudscreendis_yes_ds1_vghrsweek)) #Calculate n1i
anysudscreendis_no_ds1_vghrsweek <- subset(anysudscreendis_no_ds1,
select = c(vghrsweek)) #Subset 2i data
anysudscreendis_vghrsweek_m2i <-
apply(anysudscreendis_no_ds1_vghrsweek, 2, mean) #Calculate m2i
anysudscreendis_vghrsweek_sd2i <-
apply(anysudscreendis_no_ds1_vghrsweek, 2, sd) #Calculate sd2i
anysudscreendis_vghrsweek_n2i <- colSums(!
is.na(anysudscreendis_no_ds1_vghrsweek)) #Calculate n2i
ds1anysudscreendis_meta <- data.frame(m1i =
anysudscreendis_vghrsweek_m1i, sd1i = anysudscreendis_vghrsweek_sd1i,
n1i = anysudscreendis_vghrsweek_n1i, m2i =
anysudscreendis_vghrsweek_m2i, sd2i = anysudscreendis_vghrsweek_sd2i,
n2i = anysudscreendis_vghrsweek_n2i) #MA dataframe
ds1anysudscreendis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1anysudscreendis_meta) #Calculate yi and vi
```

```r
#Study 2
anysudscreendis_yes_ds2_vghrsweek <- subset(anysudscreendis_yes_ds2,
select = c(vghrsweek)) #Subset 1i data
anysudscreendis_vghrsweek_m1i <-
apply(anysudscreendis_yes_ds2_vghrsweek, 2, mean) #Calculate m1i
anysudscreendis_vghrsweek_sd1i <-
apply(anysudscreendis_yes_ds2_vghrsweek, 2, sd) #Calculate sd1i
anysudscreendis_vghrsweek_n1i <- colSums(!
is.na(anysudscreendis_yes_ds2_vghrsweek)) #Calculate n1i
anysudscreendis_no_ds2_vghrsweek <- subset(anysudscreendis_no_ds2,
select = c(vghrsweek)) #Subset 2i data
anysudscreendis_vghrsweek_m2i <-
apply(anysudscreendis_no_ds2_vghrsweek, 2, mean) #Calculate m2i
anysudscreendis_vghrsweek_sd2i <-
apply(anysudscreendis_no_ds2_vghrsweek, 2, sd) #Calculate sd2i
anysudscreendis_vghrsweek_n2i <- colSums(!
is.na(anysudscreendis_no_ds2_vghrsweek)) #Calculate n2i
ds2anysudscreendis_meta <- data.frame(m1i =
anysudscreendis_vghrsweek_m1i, sd1i = anysudscreendis_vghrsweek_sd1i,
n1i = anysudscreendis_vghrsweek_n1i, m2i =
anysudscreendis_vghrsweek_m2i, sd2i = anysudscreendis_vghrsweek_sd2i,
n2i = anysudscreendis_vghrsweek_n2i) #MA dataframe
ds2anysudscreendis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreendis_meta) #Calculate yi and vi

#FE meta-analysis
(anysudscreendis_meta <- rbind(ds1anysudscreendis_meta,
ds2anysudscreendis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 15.64444 13.80243  45 10.85915 10.03794 142  4.7853 4.9431
## 2 16.68889 11.65571  45 18.97797 25.64589 227 -2.2891 5.9164

(anysudscreendis_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreendis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 4.6086, p-val = 0.0318
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   1.5651   1.6411   0.9537   0.3402  -1.6513   4.7816
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Days per week

```
#Study 1
anysudscreendis_yes_ds1_vgdaysweek <- subset(anysudscreendis_yes_ds1,
select = c(vgdaysweek)) #Subset 1i data
anysudscreendis_vgdaysweek_m1i <-
apply(anysudscreendis_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
anysudscreendis_vgdaysweek_sd1i <-
apply(anysudscreendis_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
anysudscreendis_vgdaysweek_n1i <- colSums(!
is.na(anysudscreendis_yes_ds1_vgdaysweek)) #Calculate n1i
anysudscreendis_no_ds1_vgdaysweek <- subset(anysudscreendis_no_ds1,
select = c(vgdaysweek)) #Subset 2i data
anysudscreendis_vgdaysweek_m2i <-
apply(anysudscreendis_no_ds1_vgdaysweek, 2, mean) #Calculate m2i
anysudscreendis_vgdaysweek_sd2i <-
apply(anysudscreendis_no_ds1_vgdaysweek, 2, sd) #Calculate sd2i
anysudscreendis_vgdaysweek_n2i <- colSums(!
is.na(anysudscreendis_no_ds1_vgdaysweek)) #Calculate n2i
ds1anysudscreendis_meta <- data.frame(m1i =
anysudscreendis_vgdaysweek_m1i, sd1i =
anysudscreendis_vgdaysweek_sd1i, n1i = anysudscreendis_vgdaysweek_n1i,
m2i = anysudscreendis_vgdaysweek_m2i, sd2i =
anysudscreendis_vgdaysweek_sd2i, n2i = anysudscreendis_vgdaysweek_n2i)
#MA dataframe
ds1anysudscreendis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1anysudscreendis_meta) #Calculate yi and vi

#Study 2
anysudscreendis_yes_ds2_vgdaysweek <- subset(anysudscreendis_yes_ds2,
select = c(vgdaysweek)) #Subset 1i data
anysudscreendis_vgdaysweek_m1i <-
apply(anysudscreendis_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
anysudscreendis_vgdaysweek_sd1i <-
apply(anysudscreendis_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
anysudscreendis_vgdaysweek_n1i <- colSums(!
is.na(anysudscreendis_yes_ds2_vgdaysweek)) #Calculate n1i
anysudscreendis_no_ds2_vgdaysweek <- subset(anysudscreendis_no_ds2,
select = c(vgdaysweek)) #Subset 2i data
anysudscreendis_vgdaysweek_m2i <-
apply(anysudscreendis_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
anysudscreendis_vgdaysweek_sd2i <-
apply(anysudscreendis_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
anysudscreendis_vgdaysweek_n2i <- colSums(!
is.na(anysudscreendis_no_ds2_vgdaysweek)) #Calculate n2i
ds2anysudscreendis_meta <- data.frame(m1i =
anysudscreendis_vgdaysweek_m1i, sd1i =
anysudscreendis_vgdaysweek_sd1i, n1i = anysudscreendis_vgdaysweek_n1i,
```

```
m2i = anysudscreendis_vgdaysweek_m2i, sd2i =
anysudscreendis_vgdaysweek_sd2i, n2i = anysudscreendis_vgdaysweek_n2i)
#MA dataframe
ds2anysudscreendis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreendis_meta) #Calculate yi and vi

#FE meta-analysis
(anysudscreendis_meta <- rbind(ds1anysudscreendis_meta,
ds2anysudscreendis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 5.955556 1.770408  45 4.845070 2.273173 142 1.1105 0.1060
## 2 5.000000 2.110579  45 4.669604 2.232325 227 0.3304 0.1209

(anysudscreendis_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreendis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.6810, p-val = 0.1016
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.7460   0.2377   3.1386   0.0017   0.2802   1.2119     **
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Any SUD - year

Replicated Effect

Hours per day

Study 1

```
(vghrsday_anysudscreenyear_ds1 <- t.test(vghrsday ~ alcsudyear,
data=ds1anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsudyear
## t = 0.0080699, df = 27.265, p-value = 0.9936
```

```
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.7382208  0.7440532
## sample estimates:
## mean in group 0 mean in group 1
##        2.176829        2.173913
```

Study 2

```
(vghrsday_anysudscreenyear_ds2 <- t.test(vghrsday ~ alcsudyear,
data=ds2anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsudyear
## t = 1.5875, df = 51.494, p-value = 0.1185
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.1744497  1.4942878
## sample estimates:
## mean in group 0 mean in group 1
##        3.659919        3.000000
```

Hours per week

Study 1

```
(vghrsweek_anysudscreenyear_ds1 <- t.test(vghrsweek ~ alcsudyear,
data=ds1anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsudyear
## t = -0.51735, df = 27.504, p-value = 0.609
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -6.828211  4.076355
## sample estimates:
## mean in group 0 mean in group 1
##        11.84146        13.21739
```

Study 2

```
(vghrsweek_anysudscreenyear_ds2 <- t.test(vghrsweek ~ alcsudyear,
data=ds2anysudscreen))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsudyear
## t = 1.6334, df = 45.81, p-value = 0.1092
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.126245 10.815314
## sample estimates:
## mean in group 0 mean in group 1
##       19.04453       14.20000
```

Days per week

Study 1

```
(vgdaysweek_anysudscreenyear_ds1 <- t.test(vgdaysweek ~ alcsudyear,
data=ds1anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsudyear
## t = -2.2487, df = 33.046, p-value = 0.03132
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.73909379 -0.08699316
## sample estimates:
## mean in group 0 mean in group 1
##       5.000000       5.913043
```

Study 2

```
(vgdaysweek_anysudscreenyear_ds2 <- t.test(vgdaysweek ~ alcsudyear,
data=ds2anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsudyear
## t = 0.4689, df = 28.688, p-value = 0.6427
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.7566627  1.2065413
## sample estimates:
## mean in group 0 mean in group 1
##       4.744939       4.520000
```

MD

Hours per day

```
#Study 1
anysudscreenyear_yes_ds1_vghrsday <- subset(anysudscreenyear_yes_ds1,
select = c(vghrsday)) #Subset 1i data
anysudscreenyear_vghrsday_m1i <-
apply(anysudscreenyear_yes_ds1_vghrsday, 2, mean) #Calculate m1i
anysudscreenyear_vghrsday_sd1i <-
apply(anysudscreenyear_yes_ds1_vghrsday, 2, sd) #Calculate sd1i
anysudscreenyear_vghrsday_n1i <- colSums(!
is.na(anysudscreenyear_yes_ds1_vghrsday)) #Calculate n1i
anysudscreenyear_no_ds1_vghrsday <- subset(anysudscreenyear_no_ds1,
select = c(vghrsday)) #Subset 2i data
anysudscreenyear_vghrsday_m2i <-
apply(anysudscreenyear_no_ds1_vghrsday, 2, mean) #Calculate m2i
anysudscreenyear_vghrsday_sd2i <-
apply(anysudscreenyear_no_ds1_vghrsday, 2, sd) #Calculate sd2i
anysudscreenyear_vghrsday_n2i <- colSums(!
is.na(anysudscreenyear_no_ds1_vghrsday)) #Calculate n2i
ds1anysudscreenyear_meta <- data.frame(m1i =
anysudscreenyear_vghrsday_m1i, sd1i = anysudscreenyear_vghrsday_sd1i,
n1i = anysudscreenyear_vghrsday_n1i, m2i =
anysudscreenyear_vghrsday_m2i, sd2i = anysudscreenyear_vghrsday_sd2i,
n2i = anysudscreenyear_vghrsday_n2i) #MA dataframe
ds1anysudscreenyear_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1anysudscreenyear_meta) #Calculate yi and vi

#Study 2
anysudscreenyear_yes_ds2_vghrsday <- subset(anysudscreenyear_yes_ds2,
select = c(vghrsday)) #Subset 1i data
anysudscreenyear_vghrsday_m1i <-
apply(anysudscreenyear_yes_ds2_vghrsday, 2, mean) #Calculate m1i
anysudscreenyear_vghrsday_sd1i <-
apply(anysudscreenyear_yes_ds2_vghrsday, 2, sd) #Calculate sd1i
anysudscreenyear_vghrsday_n1i <- colSums(!
is.na(anysudscreenyear_yes_ds2_vghrsday)) #Calculate n1i
anysudscreenyear_no_ds2_vghrsday <- subset(anysudscreenyear_no_ds2,
select = c(vghrsday)) #Subset 2i data
anysudscreenyear_vghrsday_m2i <-
apply(anysudscreenyear_no_ds2_vghrsday, 2, mean) #Calculate m2i
anysudscreenyear_vghrsday_sd2i <-
apply(anysudscreenyear_no_ds2_vghrsday, 2, sd) #Calculate sd2i
anysudscreenyear_vghrsday_n2i <- colSums(!
is.na(anysudscreenyear_no_ds2_vghrsday)) #Calculate n2i
ds2anysudscreenyear_meta <- data.frame(m1i =
anysudscreenyear_vghrsday_m1i, sd1i = anysudscreenyear_vghrsday_sd1i,
n1i = anysudscreenyear_vghrsday_n1i, m2i =
```

```
anysudscreenyear_vghrsday_m2i, sd2i = anysudscreenyear_vghrsday_sd2i,
n2i = anysudscreenyear_vghrsday_n2i) #MA dataframe
ds2anysudscreenyear_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreenyear_meta) #Calculate yi and vi

#FE meta-analysis
(anysudscreenyear_meta <- rbind(ds1anysudscreenyear_meta,
ds2anysudscreenyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.173913 1.641844  23 2.176829 1.481733 164 -0.0029 0.1306
## 2 3.000000 1.707825  25 3.659919 3.723925 247 -0.6599 0.1728

(anysudscreenyear_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreenyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 1.4227, p-val = 0.2330
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.2857   0.2727  -1.0476   0.2948  -0.8202   0.2488
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Hours per week

```
#Study 1
anysudscreenyear_yes_ds1_vghrsweek <- subset(anysudscreenyear_yes_ds1,
select = c(vghrsweek)) #Subset 1i data
anysudscreenyear_vghrsweek_m1i <-
apply(anysudscreenyear_yes_ds1_vghrsweek, 2, mean) #Calculate m1i
anysudscreenyear_vghrsweek_sd1i <-
apply(anysudscreenyear_yes_ds1_vghrsweek, 2, sd) #Calculate sd1i
anysudscreenyear_vghrsweek_n1i <- colSums(!
is.na(anysudscreenyear_yes_ds1_vghrsweek)) #Calculate n1i
anysudscreenyear_no_ds1_vghrsweek <- subset(anysudscreenyear_no_ds1,
select = c(vghrsweek)) #Subset 2i data
anysudscreenyear_vghrsweek_m2i <-
apply(anysudscreenyear_no_ds1_vghrsweek, 2, mean) #Calculate m2i
anysudscreenyear_vghrsweek_sd2i <-
apply(anysudscreenyear_no_ds1_vghrsweek, 2, sd) #Calculate sd2i
anysudscreenyear_vghrsweek_n2i <- colSums(!
is.na(anysudscreenyear_no_ds1_vghrsweek)) #Calculate n2i
```

```
ds1anysudscreenyear_meta <- data.frame(m1i =
anysudscreenyear_vghrsweek_m1i, sd1i =
anysudscreenyear_vghrsweek_sd1i, n1i = anysudscreenyear_vghrsweek_n1i,
m2i = anysudscreenyear_vghrsweek_m2i, sd2i =
anysudscreenyear_vghrsweek_sd2i, n2i = anysudscreenyear_vghrsweek_n2i)
#MA dataframe
ds1anysudscreenyear_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1anysudscreenyear_meta) #Calculate yi and vi

#Study 2
anysudscreenyear_yes_ds2_vghrsweek <- subset(anysudscreenyear_yes_ds2,
select = c(vghrsweek)) #Subset 1i data
anysudscreenyear_vghrsweek_m1i <-
apply(anysudscreenyear_yes_ds2_vghrsweek, 2, mean) #Calculate m1i
anysudscreenyear_vghrsweek_sd1i <-
apply(anysudscreenyear_yes_ds2_vghrsweek, 2, sd) #Calculate sd1i
anysudscreenyear_vghrsweek_n1i <- colSums(!
is.na(anysudscreenyear_yes_ds2_vghrsweek)) #Calculate n1i
anysudscreenyear_no_ds2_vghrsweek <- subset(anysudscreenyear_no_ds2,
select = c(vghrsweek)) #Subset 2i data
anysudscreenyear_vghrsweek_m2i <-
apply(anysudscreenyear_no_ds2_vghrsweek, 2, mean) #Calculate m2i
anysudscreenyear_vghrsweek_sd2i <-
apply(anysudscreenyear_no_ds2_vghrsweek, 2, sd) #Calculate sd2i
anysudscreenyear_vghrsweek_n2i <- colSums(!
is.na(anysudscreenyear_no_ds2_vghrsweek)) #Calculate n2i
ds2anysudscreenyear_meta <- data.frame(m1i =
anysudscreenyear_vghrsweek_m1i, sd1i =
anysudscreenyear_vghrsweek_sd1i, n1i = anysudscreenyear_vghrsweek_n1i,
m2i = anysudscreenyear_vghrsweek_m2i, sd2i =
anysudscreenyear_vghrsweek_sd2i, n2i = anysudscreenyear_vghrsweek_n2i)
#MA dataframe
ds2anysudscreenyear_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreenyear_meta) #Calculate yi and vi

#FE meta-analysis
(anysudscreenyear_meta <- rbind(ds1anysudscreenyear_meta,
ds2anysudscreenyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 13.21739 12.05652  23 11.84146 11.11454 164  1.3759 7.0732
## 2 14.20000 12.56981  25 19.04453 24.73375 247 -4.8445 8.7968

(anysudscreenyear_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreenyear_meta))

##
## Fixed-Effects Model (k = 2)
##
```

```
## Test for Heterogeneity:
## Q(df = 1) = 2.4382, p-val = 0.1184
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -1.3965   1.9801  -0.7053   0.4806  -5.2774   2.4844
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
anysudscreenyear_yes_ds1_vgdaysweek <-
subset(anysudscreenyear_yes_ds1, select = c(vgdaysweek)) #Subset 1i data
anysudscreenyear_vgdaysweek_m1i <-
apply(anysudscreenyear_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
anysudscreenyear_vgdaysweek_sd1i <-
apply(anysudscreenyear_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
anysudscreenyear_vgdaysweek_n1i <- colSums(!
is.na(anysudscreenyear_yes_ds1_vgdaysweek)) #Calculate n1i
anysudscreenyear_no_ds1_vgdaysweek <- subset(anysudscreenyear_no_ds1,
select = c(vgdaysweek)) #Subset 2i data
anysudscreenyear_vgdaysweek_m2i <-
apply(anysudscreenyear_no_ds1_vgdaysweek, 2, mean) #Calculate m2i
anysudscreenyear_vgdaysweek_sd2i <-
apply(anysudscreenyear_no_ds1_vgdaysweek, 2, sd) #Calculate sd2i
anysudscreenyear_vgdaysweek_n2i <- colSums(!
is.na(anysudscreenyear_no_ds1_vgdaysweek)) #Calculate n2i
ds1anysudscreenyear_meta <- data.frame(m1i =
anysudscreenyear_vgdaysweek_m1i, sd1i =
anysudscreenyear_vgdaysweek_sd1i, n1i =
anysudscreenyear_vgdaysweek_n1i, m2i =
anysudscreenyear_vgdaysweek_m2i, sd2i =
anysudscreenyear_vgdaysweek_sd2i, n2i =
anysudscreenyear_vgdaysweek_n2i) #MA dataframe
ds1anysudscreenyear_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1anysudscreenyear_meta) #Calculate yi and vi

#Study 2
anysudscreenyear_yes_ds2_vgdaysweek <-
subset(anysudscreenyear_yes_ds2, select = c(vgdaysweek)) #Subset 1i data
anysudscreenyear_vgdaysweek_m1i <-
apply(anysudscreenyear_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
anysudscreenyear_vgdaysweek_sd1i <-
apply(anysudscreenyear_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
anysudscreenyear_vgdaysweek_n1i <- colSums(!
```

```
is.na(anysudscreenyear_yes_ds2_vgdaysweek)) #Calculate n1i
anysudscreenyear_no_ds2_vgdaysweek <- subset(anysudscreenyear_no_ds2,
select = c(vgdaysweek)) #Subset 2i data
anysudscreenyear_vgdaysweek_m2i <-
apply(anysudscreenyear_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
anysudscreenyear_vgdaysweek_sd2i <-
apply(anysudscreenyear_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
anysudscreenyear_vgdaysweek_n2i <- colSums(!
is.na(anysudscreenyear_no_ds2_vgdaysweek)) #Calculate n2i
ds2anysudscreenyear_meta <- data.frame(m1i =
anysudscreenyear_vgdaysweek_m1i, sd1i =
anysudscreenyear_vgdaysweek_sd1i, n1i =
anysudscreenyear_vgdaysweek_n1i, m2i =
anysudscreenyear_vgdaysweek_m2i, sd2i =
anysudscreenyear_vgdaysweek_sd2i, n2i =
anysudscreenyear_vgdaysweek_n2i) #MA dataframe
ds2anysudscreenyear_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreenyear_meta) #Calculate yi and vi

#FE meta-analysis
(anysudscreenyear_meta <- rbind(ds1anysudscreenyear_meta,
ds2anysudscreenyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 5.913043 1.755848  23 5.000000 2.248380 164  0.9130 0.1649
## 2 4.520000 2.293469  25 4.744939 2.207647 247 -0.2249 0.2301

(anysudscreenyear_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreenyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 3.2785, p-val = 0.0702
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.4381   0.3099   1.4134   0.1575  -0.1694   1.0455
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Any SUD - month

Replicated Effect

Hours per day

Study 1 - CANNOT CALCULATE

Study 2

```
(vghrsday_anysudscreenmonth_ds2 <- t.test(vghrsday ~ alcsudmonth,
data=ds2anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsudmonth
## t = 0.73757, df = 7.7998, p-value = 0.4824
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.002759  1.939686
## sample estimates:
## mean in group 0 mean in group 1
##        3.611321        3.142857
```

Hours per week

Study 1 - CANNOT CALCULATE

Study 2

```
(vghrsweek_anysudscreenmonth_ds2 <- t.test(vghrsweek ~ alcsudmonth,
data=ds2anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsudmonth
## t = 0.44469, df = 7.4127, p-value = 0.6692
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -8.862791 13.025594
## sample estimates:
## mean in group 0 mean in group 1
##        18.65283        16.57143
```

Days per week

Study 1 - CANNOT CALCULATE

Study 2

```
(vgdaysweek_anysudscreenmonth_ds2 <- t.test(vgdaysweek ~ alcsudmonth,
data=ds2anysudscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsudmonth
## t = -0.35443, df = 6.3654, p-value = 0.7345
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.210045  1.644007
## sample estimates:
## mean in group 0 mean in group 1
##        4.716981        5.000000
```

MD

Hours per day

```
#Study 1
anysudscreenmonth_yes_ds1_vghrsday <-
subset(anysudscreenmonth_yes_ds1, select = c(vghrsday)) #Subset 1i data
anysudscreenmonth_vghrsday_m1i <-
apply(anysudscreenmonth_yes_ds1_vghrsday, 2, mean) #Calculate m1i
anysudscreenmonth_vghrsday_sd1i <-
apply(anysudscreenmonth_yes_ds1_vghrsday, 2, sd) #Calculate sd1i
anysudscreenmonth_vghrsday_n1i <- colSums(!
is.na(anysudscreenmonth_yes_ds1_vghrsday)) #Calculate n1i
anysudscreenmonth_no_ds1_vghrsday <-
subset(anysudscreenmonth_no_ds1, select = c(vghrsday)) #Subset 2i data
anysudscreenmonth_vghrsday_m2i <-
apply(anysudscreenmonth_no_ds1_vghrsday, 2, mean) #Calculate m2i
anysudscreenmonth_vghrsday_sd2i <-
apply(anysudscreenmonth_no_ds1_vghrsday, 2, sd) #Calculate sd2i
anysudscreenmonth_vghrsday_n2i <- colSums(!
is.na(anysudscreenmonth_no_ds1_vghrsday)) #Calculate n2i
ds1anysudscreenmonth_meta <- data.frame(m1i =
anysudscreenmonth_vghrsday_m1i, sd1i =
anysudscreenmonth_vghrsday_sd1i, n1i = anysudscreenmonth_vghrsday_n1i,
m2i = anysudscreenmonth_vghrsday_m2i, sd2i =
anysudscreenmonth_vghrsday_sd2i, n2i =
anysudscreenmonth_vghrsday_n2i) #MA dataframe
ds1anysudscreenmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
```

```
data=ds1anysudscreenmonth_meta) #Calculate yi and vi

#Study 2
anysudscreenmonth_yes_ds2_vghrsday <-
subset(anysudscreenmonth_yes_ds2, select = c(vghrsday)) #Subset 1i data
anysudscreenmonth_vghrsday_m1i <-
apply(anysudscreenmonth_yes_ds2_vghrsday, 2, mean) #Calculate m1i
anysudscreenmonth_vghrsday_sd1i <-
apply(anysudscreenmonth_yes_ds2_vghrsday, 2, sd) #Calculate sd1i
anysudscreenmonth_vghrsday_n1i <- colSums(!
is.na(anysudscreenmonth_yes_ds2_vghrsday)) #Calculate n1i
anysudscreenmonth_no_ds2_vghrsday <-
subset(anysudscreenmonth_no_ds2, select = c(vghrsday)) #Subset 2i data
anysudscreenmonth_vghrsday_m2i <-
apply(anysudscreenmonth_no_ds2_vghrsday, 2, mean) #Calculate m2i
anysudscreenmonth_vghrsday_sd2i <-
apply(anysudscreenmonth_no_ds2_vghrsday, 2, sd) #Calculate sd2i
anysudscreenmonth_vghrsday_n2i <- colSums(!
is.na(anysudscreenmonth_no_ds2_vghrsday)) #Calculate n2i
ds2anysudscreenmonth_meta <- data.frame(m1i =
anysudscreenmonth_vghrsday_m1i, sd1i =
anysudscreenmonth_vghrsday_sd1i, n1i = anysudscreenmonth_vghrsday_n1i,
m2i = anysudscreenmonth_vghrsday_m2i, sd2i =
anysudscreenmonth_vghrsday_sd2i, n2i =
anysudscreenmonth_vghrsday_n2i) #MA dataframe
ds2anysudscreenmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreenmonth_meta) #Calculate yi and vi

#FE meta-analysis
(anysudscreenmonth_meta <- rbind(ds1anysudscreenmonth_meta,
ds2anysudscreenmonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1     NaN       NA   0 2.176471 1.497626 187      NA     NA
## 2 3.142857 1.573592   7 3.611321 3.628050 265 -0.4685 0.4034

(anysudscreenmonth_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreenmonth_meta))

##
## Fixed-Effects Model (k = 1)
##
## Test for Heterogeneity:
## Q(df = 0) = 0.0000, p-val = 1.0000
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.4685   0.6351  -0.7376   0.4608  -1.7133   0.7764
##
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
anysudscreenmonth_yes_ds1_vghrsweek <-
subset(anysudscreenmonth_yes_ds1, select = c(vghrsweek)) #Subset 1i data
anysudscreenmonth_vghrsweek_m1i <-
apply(anysudscreenmonth_yes_ds1_vghrsweek, 2, mean) #Calculate m1i
anysudscreenmonth_vghrsweek_sd1i <-
apply(anysudscreenmonth_yes_ds1_vghrsweek, 2, sd) #Calculate sd1i
anysudscreenmonth_vghrsweek_n1i <- colSums(!
is.na(anysudscreenmonth_yes_ds1_vghrsweek)) #Calculate n1i
anysudscreenmonth_no_ds1_vghrsweek <-
subset(anysudscreenmonth_no_ds1, select = c(vghrsweek)) #Subset 2i data
anysudscreenmonth_vghrsweek_m2i <-
apply(anysudscreenmonth_no_ds1_vghrsweek, 2, mean) #Calculate m2i
anysudscreenmonth_vghrsweek_sd2i <-
apply(anysudscreenmonth_no_ds1_vghrsweek, 2, sd) #Calculate sd2i
anysudscreenmonth_vghrsweek_n2i <- colSums(!
is.na(anysudscreenmonth_no_ds1_vghrsweek)) #Calculate n2i
ds1anysudscreenmonth_meta <- data.frame(m1i =
anysudscreenmonth_vghrsweek_m1i, sd1i =
anysudscreenmonth_vghrsweek_sd1i, n1i =
anysudscreenmonth_vghrsweek_n1i, m2i =
anysudscreenmonth_vghrsweek_m2i, sd2i =
anysudscreenmonth_vghrsweek_sd2i, n2i =
anysudscreenmonth_vghrsweek_n2i) #MA dataframe
ds1anysudscreenmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1anysudscreenmonth_meta) #Calculate yi and vi

#Study 2
anysudscreenmonth_yes_ds2_vghrsweek <-
subset(anysudscreenmonth_yes_ds2, select = c(vghrsweek)) #Subset 1i data
anysudscreenmonth_vghrsweek_m1i <-
apply(anysudscreenmonth_yes_ds2_vghrsweek, 2, mean) #Calculate m1i
anysudscreenmonth_vghrsweek_sd1i <-
apply(anysudscreenmonth_yes_ds2_vghrsweek, 2, sd) #Calculate sd1i
anysudscreenmonth_vghrsweek_n1i <- colSums(!
is.na(anysudscreenmonth_yes_ds2_vghrsweek)) #Calculate n1i
anysudscreenmonth_no_ds2_vghrsweek <-
subset(anysudscreenmonth_no_ds2, select = c(vghrsweek)) #Subset 2i data
anysudscreenmonth_vghrsweek_m2i <-
apply(anysudscreenmonth_no_ds2_vghrsweek, 2, mean) #Calculate m2i
anysudscreenmonth_vghrsweek_sd2i <-
apply(anysudscreenmonth_no_ds2_vghrsweek, 2, sd) #Calculate sd2i
anysudscreenmonth_vghrsweek_n2i <- colSums(!
```

```
is.na(anysudscreenmonth_no_ds2_vghrsweek)) #Calculate n2i
ds2anysudscreenmonth_meta <- data.frame(m1i =
anysudscreenmonth_vghrsweek_m1i, sd1i =
anysudscreenmonth_vghrsweek_sd1i, n1i =
anysudscreenmonth_vghrsweek_n1i, m2i =
anysudscreenmonth_vghrsweek_m2i, sd2i =
anysudscreenmonth_vghrsweek_sd2i, n2i =
anysudscreenmonth_vghrsweek_n2i) #MA dataframe
ds2anysudscreenmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreenmonth_meta) #Calculate yi and vi

#FE meta-analysis
(anysudscreenmonth_meta <- rbind(ds1anysudscreenmonth_meta,
ds2anysudscreenmonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi      vi
## 1     NaN       NA   0 12.01070 11.20963 187      NA      NA
## 2 16.57143 11.74531   7 18.65283 24.14916 265 -2.0814 21.9082

(anysudscreenmonth_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreenmonth_meta))

##
## Fixed-Effects Model (k = 1)
##
## Test for Heterogeneity:
## Q(df = 0) = 0.0000, p-val = 1.0000
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -2.0814   4.6806  -0.4447   0.6565 -11.2552   7.0924
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
anysudscreenmonth_yes_ds1_vgdaysweek <-
subset(anysudscreenmonth_yes_ds1, select = c(vgdaysweek)) #Subset 1i
data
anysudscreenmonth_vgdaysweek_m1i <-
apply(anysudscreenmonth_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
anysudscreenmonth_vgdaysweek_sd1i <-
apply(anysudscreenmonth_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
anysudscreenmonth_vgdaysweek_n1i <- colSums(!
is.na(anysudscreenmonth_yes_ds1_vgdaysweek)) #Calculate n1i
anysudscreenmonth_no_ds1_vgdaysweek <-
```

```
subset(anysudscreenmonth_no_ds1, select = c(vgdaysweek)) #Subset 2i
data
anysudscreenmonth_vgdaysweek_m2i <-
apply(anysudscreenmonth_no_ds1_vgdaysweek, 2, mean) #Calculate m2i
anysudscreenmonth_vgdaysweek_sd2i <-
apply(anysudscreenmonth_no_ds1_vgdaysweek, 2, sd) #Calculate sd2i
anysudscreenmonth_vgdaysweek_n2i <- colSums(!
is.na(anysudscreenmonth_no_ds1_vgdaysweek)) #Calculate n2i
ds1anysudscreenmonth_meta <- data.frame(m1i =
anysudscreenmonth_vgdaysweek_m1i, sd1i =
anysudscreenmonth_vgdaysweek_sd1i, n1i =
anysudscreenmonth_vgdaysweek_n1i, m2i =
anysudscreenmonth_vgdaysweek_m2i, sd2i =
anysudscreenmonth_vgdaysweek_sd2i, n2i =
anysudscreenmonth_vgdaysweek_n2i) #MA dataframe
ds1anysudscreenmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds1anysudscreenmonth_meta) #Calculate yi and vi

#Study 2
anysudscreenmonth_yes_ds2_vgdaysweek <-
subset(anysudscreenmonth_yes_ds2, select = c(vgdaysweek)) #Subset 1i
data
anysudscreenmonth_vgdaysweek_m1i <-
apply(anysudscreenmonth_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
anysudscreenmonth_vgdaysweek_sd1i <-
apply(anysudscreenmonth_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
anysudscreenmonth_vgdaysweek_n1i <- colSums(!
is.na(anysudscreenmonth_yes_ds2_vgdaysweek)) #Calculate n1i
anysudscreenmonth_no_ds2_vgdaysweek <-
subset(anysudscreenmonth_no_ds2, select = c(vgdaysweek)) #Subset 2i
data
anysudscreenmonth_vgdaysweek_m2i <-
apply(anysudscreenmonth_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
anysudscreenmonth_vgdaysweek_sd2i <-
apply(anysudscreenmonth_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
anysudscreenmonth_vgdaysweek_n2i <- colSums(!
is.na(anysudscreenmonth_no_ds2_vgdaysweek)) #Calculate n2i
ds2anysudscreenmonth_meta <- data.frame(m1i =
anysudscreenmonth_vgdaysweek_m1i, sd1i =
anysudscreenmonth_vgdaysweek_sd1i, n1i =
anysudscreenmonth_vgdaysweek_n1i, m2i =
anysudscreenmonth_vgdaysweek_m2i, sd2i =
anysudscreenmonth_vgdaysweek_sd2i, n2i =
anysudscreenmonth_vgdaysweek_n2i) #MA dataframe
ds2anysudscreenmonth_meta <- escalc(measure="MD", m1i = m1i, sd1i =
sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i,
data=ds2anysudscreenmonth_meta) #Calculate yi and vi

#FE meta-analysis
```

```
(anysudscreenmonth_meta <- rbind(ds1anysudscreenmonth_meta,
ds2anysudscreenmonth_meta))

##   m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 NaN       NA   0 5.112299 2.210242 187     NA     NA
## 2   5 2.081666   7 4.716981 2.218870 265 0.2830 0.6376

(anysudscreenmonth_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=anysudscreenmonth_meta))

##
## Fixed-Effects Model (k = 1)
##
## Test for Heterogeneity:
## Q(df = 0) = 0.0000, p-val = 1.0000
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2830   0.7985   0.3544   0.7230  -1.2820   1.8481
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AUD - discharge

Replicated Effect

Hours per day

Study 1

```
(vghrsday_auditdis_ds1 <- t.test(vghrsday ~ alcsuddis, data=ds1audit))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsuddis
## t = -1.8775, df = 35.221, p-value = 0.06875
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.58705733  0.06178851
## sample estimates:
## mean in group 0 mean in group 1
##        2.108333        2.870968
```

Study 2

```
(vghrsday_auditdis_ds2 <- t.test(vghrsday ~ alcsuddis, data=ds2audit))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsuddis
## t = 0.2508, df = 37.667, p-value = 0.8033
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.7891072  1.0122085
## sample estimates:
## mean in group 0 mean in group 1
##        3.424051        3.312500
```

Hours per week

Study 1

```
(vghrsweek_auditdis_ds1 <- t.test(vghrsweek ~ alcsuddis, data=ds1audit))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsuddis
## t = -2.5308, df = 36.104, p-value = 0.01588
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -13.290758  -1.466231
## sample estimates:
## mean in group 0 mean in group 1
##        11.26667        18.64516
```

Study 2

```
(vghrsweek_auditdis_ds2 <- t.test(vghrsweek ~ alcsuddis, data=ds2audit))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsuddis
## t = 0.20146, df = 33.112, p-value = 0.8416
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -5.822658  7.102721
## sample estimates:
## mean in group 0 mean in group 1
##        17.70253        17.06250
```

Days per week

Study 1

```
(vgdaysweek_auditdis_ds1 <- t.test(vgdaysweek ~ alcsuddis,
data=ds1audit))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsuddis
## t = -3.4954, df = 61.123, p-value = 0.0008875
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.992539 -0.542407
## sample estimates:
## mean in group 0 mean in group 1
##        4.958333        6.225806
```

Study 2

```
(vgdaysweek_auditdis_ds2 <- t.test(vgdaysweek ~ alcsuddis,
data=ds2audit))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsuddis
## t = -0.57634, df = 19.599, p-value = 0.5709
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.3133202  0.7452823
## sample estimates:
## mean in group 0 mean in group 1
##        4.778481        5.062500
```

MD

Hours per day

```
#Study 1
auditdis_yes_ds1_vghrsday <- subset(auditdis_yes_ds1, select = c(vghrsday))
#Subset 1i data
auditdis_vghrsday_m1i <- apply(auditdis_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
auditdis_vghrsday_sd1i <- apply(auditdis_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
```

```
auditdis_vghrsday_n1i <- colSums(!is.na(auditdis_yes_ds1_vghrsday))
#Calculate n1i
auditdis_no_ds1_vghrsday <- subset(auditdis_no_ds1, select = c(vghrsday))
#Subset 2i data
auditdis_vghrsday_m2i <- apply(auditdis_no_ds1_vghrsday, 2, mean)
#Calculate m2i
auditdis_vghrsday_sd2i <- apply(auditdis_no_ds1_vghrsday, 2, sd) #Calculate
sd2i
auditdis_vghrsday_n2i <- colSums(!is.na(auditdis_no_ds1_vghrsday))
#Calculate n2i
ds1auditdis_meta <- data.frame(m1i = auditdis_vghrsday_m1i, sd1i =
auditdis_vghrsday_sd1i, n1i = auditdis_vghrsday_n1i, m2i =
auditdis_vghrsday_m2i, sd2i = auditdis_vghrsday_sd2i, n2i =
auditdis_vghrsday_n2i) #MA dataframe
ds1auditdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1auditdis_meta) #Calculate yi
and vi

#Study 2
auditdis_yes_ds2_vghrsday <- subset(auditdis_yes_ds2, select = c(vghrsday))
#Subset 1i data
auditdis_vghrsday_m1i <- apply(auditdis_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
auditdis_vghrsday_sd1i <- apply(auditdis_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
auditdis_vghrsday_n1i <- colSums(!is.na(auditdis_yes_ds2_vghrsday))
#Calculate n1i
auditdis_no_ds2_vghrsday <- subset(auditdis_no_ds2, select = c(vghrsday))
#Subset 2i data
auditdis_vghrsday_m2i <- apply(auditdis_no_ds2_vghrsday, 2, mean)
#Calculate m2i
auditdis_vghrsday_sd2i <- apply(auditdis_no_ds2_vghrsday, 2, sd) #Calculate
sd2i
auditdis_vghrsday_n2i <- colSums(!is.na(auditdis_no_ds2_vghrsday))
#Calculate n2i
ds2auditdis_meta <- data.frame(m1i = auditdis_vghrsday_m1i, sd1i =
auditdis_vghrsday_sd1i, n1i = auditdis_vghrsday_n1i, m2i =
auditdis_vghrsday_m2i, sd2i = auditdis_vghrsday_sd2i, n2i =
auditdis_vghrsday_n2i) #MA dataframe
ds2auditdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2auditdis_meta) #Calculate yi
and vi

#FE meta-analysis
(auditdis_meta <- rbind(ds1auditdis_meta, ds2auditdis_meta))

##       m1i     sd1i n1i      m2i    sd2i n2i      yi     vi
## 1 2.870968 2.171665  31 2.108333 1.24209 120  0.7626 0.1650
## 2 3.312500 1.400893  16 3.424051 3.44621 158 -0.1116 0.1978
```

```
(auditdis_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD", method="FE",
data=auditdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.1063, p-val = 0.1467
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.3651   0.2999   1.2173   0.2235  -0.2228   0.9530
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Hours per week

```
#Study 1
auditdis_yes_ds1_vghrsweek <- subset(auditdis_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
auditdis_vghrsweek_m1i <- apply(auditdis_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
auditdis_vghrsweek_sd1i <- apply(auditdis_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
auditdis_vghrsweek_n1i <- colSums(!is.na(auditdis_yes_ds1_vghrsweek))
#Calculate n1i
auditdis_no_ds1_vghrsweek <- subset(auditdis_no_ds1, select =
c(vghrsweek)) #Subset 2i data
auditdis_vghrsweek_m2i <- apply(auditdis_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
auditdis_vghrsweek_sd2i <- apply(auditdis_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
auditdis_vghrsweek_n2i <- colSums(!is.na(auditdis_no_ds1_vghrsweek))
#Calculate n2i
ds1auditdis_meta <- data.frame(m1i = auditdis_vghrsweek_m1i, sd1i =
auditdis_vghrsweek_sd1i, n1i = auditdis_vghrsweek_n1i, m2i =
auditdis_vghrsweek_m2i, sd2i = auditdis_vghrsweek_sd2i, n2i =
auditdis_vghrsweek_n2i) #MA dataframe
ds1auditdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1auditdis_meta) #Calculate yi
and vi

#Study 2
auditdis_yes_ds2_vghrsweek <- subset(auditdis_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
auditdis_vghrsweek_m1i <- apply(auditdis_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
```

```
auditdis_vghrsweek_sd1i <- apply(auditdis_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
auditdis_vghrsweek_n1i <- colSums(!is.na(auditdis_yes_ds2_vghrsweek))
#Calculate n1i
auditdis_no_ds2_vghrsweek <- subset(auditdis_no_ds2, select =
c(vghrsweek)) #Subset 2i data
auditdis_vghrsweek_m2i <- apply(auditdis_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
auditdis_vghrsweek_sd2i <- apply(auditdis_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
auditdis_vghrsweek_n2i <- colSums(!is.na(auditdis_no_ds2_vghrsweek))
#Calculate n2i
ds2auditdis_meta <- data.frame(m1i = auditdis_vghrsweek_m1i, sd1i =
auditdis_vghrsweek_sd1i, n1i = auditdis_vghrsweek_n1i, m2i =
auditdis_vghrsweek_m2i, sd2i = auditdis_vghrsweek_sd2i, n2i =
auditdis_vghrsweek_n2i) #MA dataframe
ds2auditdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2auditdis_meta) #Calculate yi
and vi

#FE meta-analysis
(auditdis_meta <- rbind(ds1auditdis_meta, ds2auditdis_meta))

##       m1i     sd1i n1i      m2i      sd2i n2i      yi      vi
## 1 18.64516 15.48881  31 11.26667  9.557199 120  7.3785  8.5000
## 2 17.06250 10.36320  16 17.70253 23.111612 158 -0.6400 10.0929

(auditdis_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=auditdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 3.4581, p-val = 0.0629
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   3.7127   2.1480   1.7284   0.0839  -0.4974   7.9228       .
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
auditdis_yes_ds1_vgdaysweek <- subset(auditdis_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
auditdis_vgdaysweek_m1i <- apply(auditdis_yes_ds1_vgdaysweek, 2, mean)
```

```r
#Calculate m1i
auditdis_vgdaysweek_sd1i <- apply(auditdis_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
auditdis_vgdaysweek_n1i <- colSums(!is.na(auditdis_yes_ds1_vgdaysweek))
#Calculate n1i
auditdis_no_ds1_vgdaysweek <- subset(auditdis_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
auditdis_vgdaysweek_m2i <- apply(auditdis_no_ds1_vgdaysweek, 2, mean)
#Calculate m2i
auditdis_vgdaysweek_sd2i <- apply(auditdis_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
auditdis_vgdaysweek_n2i <- colSums(!is.na(auditdis_no_ds1_vgdaysweek))
#Calculate n2i
ds1auditdis_meta <- data.frame(m1i = auditdis_vgdaysweek_m1i, sd1i =
auditdis_vgdaysweek_sd1i, n1i = auditdis_vgdaysweek_n1i, m2i =
auditdis_vgdaysweek_m2i, sd2i = auditdis_vgdaysweek_sd2i, n2i =
auditdis_vgdaysweek_n2i) #MA dataframe
ds1auditdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1auditdis_meta) #Calculate yi
and vi

#Study 2
auditdis_yes_ds2_vgdaysweek <- subset(auditdis_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
auditdis_vgdaysweek_m1i <- apply(auditdis_yes_ds2_vgdaysweek, 2, mean)
#Calculate m1i
auditdis_vgdaysweek_sd1i <- apply(auditdis_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
auditdis_vgdaysweek_n1i <- colSums(!is.na(auditdis_yes_ds2_vgdaysweek))
#Calculate n1i
auditdis_no_ds2_vgdaysweek <- subset(auditdis_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
auditdis_vgdaysweek_m2i <- apply(auditdis_no_ds2_vgdaysweek, 2, mean)
#Calculate m2i
auditdis_vgdaysweek_sd2i <- apply(auditdis_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
auditdis_vgdaysweek_n2i <- colSums(!is.na(auditdis_no_ds2_vgdaysweek))
#Calculate n2i
ds2auditdis_meta <- data.frame(m1i = auditdis_vgdaysweek_m1i, sd1i =
auditdis_vgdaysweek_sd1i, n1i = auditdis_vgdaysweek_n1i, m2i =
auditdis_vgdaysweek_m2i, sd2i = auditdis_vgdaysweek_sd2i, n2i =
auditdis_vgdaysweek_n2i) #MA dataframe
ds2auditdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2auditdis_meta) #Calculate yi
and vi

#FE meta-analysis
(auditdis_meta <- rbind(ds1auditdis_meta, ds2auditdis_meta))
```

```
##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 6.225806 1.667527  31 4.958333 2.239432 120 1.2675 0.1315
## 2 5.062500 1.842779  16 4.778481 2.199083 158 0.2840 0.2428

(auditdis_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=auditdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.5837, p-val = 0.1080
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.9220   0.2921   3.1569   0.0016   0.3496   1.4945      **
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AUD - year

Replicated Effect

Hours per day

Study 1

```
(vghrsday_audityear_ds1 <- t.test(vghrsday ~ alcsudyear, data=ds1audit))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsudyear
## t = -0.85426, df = 11.921, p-value = 0.4098
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.8720486  0.8180917
## sample estimates:
## mean in group 0 mean in group 1
##        2.223022        2.750000
```

Study 2

```
(vghrsday_audityear_ds2 <- t.test(vghrsday ~ alcsudyear, data=ds2audit))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsudyear
## t = 0.53456, df = 10.453, p-value = 0.6041
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.8874763  1.4520614
## sample estimates:
## mean in group 0 mean in group 1
##        3.425150        3.142857
```

Hours per week

Study 1

```
(vghrsweek_audityear_ds1 <- t.test(vghrsweek ~ alcsudyear,
data=ds1audit))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsudyear
## t = -1.0825, df = 11.964, p-value = 0.3003
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -14.900581   5.010893
## sample estimates:
## mean in group 0 mean in group 1
##        12.38849        17.33333
```

Study 2

```
(vghrsweek_audityear_ds2 <- t.test(vghrsweek ~ alcsudyear,
data=ds2audit))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsudyear
## t = 1.2297, df = 28.353, p-value = 0.2289
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.930179  7.736852
## sample estimates:
## mean in group 0 mean in group 1
##        17.76048        14.85714
```

Days per week

Study 1

```
(vgdaysweek_adityear_ds1 <- t.test(vgdaysweek ~ alcsudyear,
data=ds1audit))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsudyear
## t = -1.9119, df = 14.22, p-value = 0.07625
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.1837186  0.1237666
## sample estimates:
## mean in group 0 mean in group 1
##        5.136691        6.166667
```

Study 2

```
(vgdaysweek_adityear_ds2 <- t.test(vgdaysweek ~ alcsudyear,
data=ds2audit))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsudyear
## t = -0.53747, df = 6.8852, p-value = 0.6079
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.908263  1.203387
## sample estimates:
## mean in group 0 mean in group 1
##        4.790419        5.142857
```

MD

Hours per day

```
#Study 1
adityear_yes_ds1_vghrsday <- subset(adityear_yes_ds1, select =
c(vghrsday)) #Subset 1i data
adityear_vghrsday_m1i <- apply(adityear_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
adityear_vghrsday_sd1i <- apply(adityear_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
adityear_vghrsday_n1i <- colSums(!is.na(adityear_yes_ds1_vghrsday))
#Calculate n1i
```

```r
audityear_no_ds1_vghrsday <- subset(audityear_no_ds1, select =
c(vghrsday)) #Subset 2i data
audityear_vghrsday_m2i <- apply(audityear_no_ds1_vghrsday, 2, mean)
#Calculate m2i
audityear_vghrsday_sd2i <- apply(audityear_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
audityear_vghrsday_n2i <- colSums(!is.na(audityear_no_ds1_vghrsday))
#Calculate n2i
ds1audityear_meta <- data.frame(m1i = audityear_vghrsday_m1i, sd1i =
audityear_vghrsday_sd1i, n1i = audityear_vghrsday_n1i, m2i =
audityear_vghrsday_m2i, sd2i = audityear_vghrsday_sd2i, n2i =
audityear_vghrsday_n2i) #MA dataframe
ds1audityear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1audityear_meta) #Calculate
yi and vi

#Study 2
audityear_yes_ds2_vghrsday <- subset(audityear_yes_ds2, select =
c(vghrsday)) #Subset 1i data
audityear_vghrsday_m1i <- apply(audityear_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
audityear_vghrsday_sd1i <- apply(audityear_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
audityear_vghrsday_n1i <- colSums(!is.na(audityear_yes_ds2_vghrsday))
#Calculate n1i
audityear_no_ds2_vghrsday <- subset(audityear_no_ds2, select =
c(vghrsday)) #Subset 2i data
audityear_vghrsday_m2i <- apply(audityear_no_ds2_vghrsday, 2, mean)
#Calculate m2i
audityear_vghrsday_sd2i <- apply(audityear_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
audityear_vghrsday_n2i <- colSums(!is.na(audityear_no_ds2_vghrsday))
#Calculate n2i
ds2audityear_meta <- data.frame(m1i = audityear_vghrsday_m1i, sd1i =
audityear_vghrsday_sd1i, n1i = audityear_vghrsday_n1i, m2i =
audityear_vghrsday_m2i, sd2i = audityear_vghrsday_sd2i, n2i =
audityear_vghrsday_n2i) #MA dataframe
ds2audityear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2audityear_meta) #Calculate
yi and vi

#FE meta-analysis
(audityear_meta <- rbind(ds1audityear_meta, ds2audityear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 2.750000 2.094365  12 2.223022 1.444847 139  0.5270 0.3805
## 2 3.142857 1.214986   7 3.425150 3.369615 167 -0.2823 0.2789

(audityear_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=audityear_meta))
```

```
##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.9932, p-val = 0.3190
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.0600   0.4012   0.1494   0.8812  -0.7263   0.8462
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
audityear_yes_ds1_vghrsweek <- subset(audityear_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
audityear_vghrsweek_m1i <- apply(audityear_yes_ds1_vghrsweek, 2, mean)
#Calculate m1i
audityear_vghrsweek_sd1i <- apply(audityear_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
audityear_vghrsweek_n1i <- colSums(!is.na(audityear_yes_ds1_vghrsweek))
#Calculate n1i
audityear_no_ds1_vghrsweek <- subset(audityear_no_ds1, select =
c(vghrsweek)) #Subset 2i data
audityear_vghrsweek_m2i <- apply(audityear_no_ds1_vghrsweek, 2, mean)
#Calculate m2i
audityear_vghrsweek_sd2i <- apply(audityear_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
audityear_vghrsweek_n2i <- colSums(!is.na(audityear_no_ds1_vghrsweek))
#Calculate n2i
ds1audityear_meta <- data.frame(m1i = audityear_vghrsweek_m1i, sd1i =
audityear_vghrsweek_sd1i, n1i = audityear_vghrsweek_n1i, m2i =
audityear_vghrsweek_m2i, sd2i = audityear_vghrsweek_sd2i, n2i =
audityear_vghrsweek_n2i) #MA dataframe
ds1audityear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1audityear_meta) #Calculate
yi and vi

#Study 2
audityear_yes_ds2_vghrsweek <- subset(audityear_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
audityear_vghrsweek_m1i <- apply(audityear_yes_ds2_vghrsweek, 2, mean)
#Calculate m1i
audityear_vghrsweek_sd1i <- apply(audityear_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
audityear_vghrsweek_n1i <- colSums(!is.na(audityear_yes_ds2_vghrsweek))
```

```
#Calculate n1i
audityear_no_ds2_vghrsweek <- subset(audityear_no_ds2, select =
c(vghrsweek)) #Subset 2i data
audityear_vghrsweek_m2i <- apply(audityear_no_ds2_vghrsweek, 2, mean)
#Calculate m2i
audityear_vghrsweek_sd2i <- apply(audityear_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
audityear_vghrsweek_n2i <- colSums(!is.na(audityear_no_ds2_vghrsweek))
#Calculate n2i
ds2audityear_meta <- data.frame(m1i = audityear_vghrsweek_m1i, sd1i =
audityear_vghrsweek_sd1i, n1i = audityear_vghrsweek_n1i, m2i =
audityear_vghrsweek_m2i, sd2i = audityear_vghrsweek_sd2i, n2i =
audityear_vghrsweek_n2i) #MA dataframe
ds2audityear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2audityear_meta) #Calculate
yi and vi

#FE meta-analysis
(audityear_meta <- rbind(ds1audityear_meta, ds2audityear_meta))

##       m1i      sd1i n1i      m2i     sd2i n2i      yi      vi
## 1 17.33333 15.493889  12 12.38849 10.93360 139  4.9448 20.8651
## 2 14.85714  4.180453   7 17.76048 22.67056 167 -2.9033  5.5742

(audityear_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=audityear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.3296, p-val = 0.1269
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -1.2487   2.0974  -0.5954   0.5516  -5.3595   2.8621
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
audityear_yes_ds1_vgdaysweek <- subset(audityear_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
audityear_vgdaysweek_m1i <- apply(audityear_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
audityear_vgdaysweek_sd1i <- apply(audityear_yes_ds1_vgdaysweek, 2, sd)
#Calculate sd1i
```

```
adityear_vgdaysweek_n1i <- colSums(!
is.na(adityear_yes_ds1_vgdaysweek)) #Calculate n1i
adityear_no_ds1_vgdaysweek <- subset(adityear_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
adityear_vgdaysweek_m2i <- apply(adityear_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
adityear_vgdaysweek_sd2i <- apply(adityear_no_ds1_vgdaysweek, 2, sd)
#Calculate sd2i
adityear_vgdaysweek_n2i <- colSums(!
is.na(adityear_no_ds1_vgdaysweek)) #Calculate n2i
ds1adityear_meta <- data.frame(m1i = adityear_vgdaysweek_m1i, sd1i =
adityear_vgdaysweek_sd1i, n1i = adityear_vgdaysweek_n1i, m2i =
adityear_vgdaysweek_m2i, sd2i = adityear_vgdaysweek_sd2i, n2i =
adityear_vgdaysweek_n2i) #MA dataframe
ds1adityear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1adityear_meta) #Calculate
yi and vi

#Study 2
adityear_yes_ds2_vgdaysweek <- subset(adityear_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
adityear_vgdaysweek_m1i <- apply(adityear_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
adityear_vgdaysweek_sd1i <- apply(adityear_yes_ds2_vgdaysweek, 2, sd)
#Calculate sd1i
adityear_vgdaysweek_n1i <- colSums(!
is.na(adityear_yes_ds2_vgdaysweek)) #Calculate n1i
adityear_no_ds2_vgdaysweek <- subset(adityear_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
adityear_vgdaysweek_m2i <- apply(adityear_no_ds2_vgdaysweek, 2,
mean) #Calculate m2i
adityear_vgdaysweek_sd2i <- apply(adityear_no_ds2_vgdaysweek, 2, sd)
#Calculate sd2i
adityear_vgdaysweek_n2i <- colSums(!
is.na(adityear_no_ds2_vgdaysweek)) #Calculate n2i
ds2adityear_meta <- data.frame(m1i = adityear_vgdaysweek_m1i, sd1i =
adityear_vgdaysweek_sd1i, n1i = adityear_vgdaysweek_n1i, m2i =
adityear_vgdaysweek_m2i, sd2i = adityear_vgdaysweek_sd2i, n2i =
adityear_vgdaysweek_n2i) #MA dataframe
ds2adityear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i =
n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2adityear_meta) #Calculate
yi and vi

#FE meta-analysis
(adityear_meta <- rbind(ds1adityear_meta, ds2adityear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 6.166667 1.749459  12 5.136691 2.210651 139 1.0300 0.2902
## 2 5.142857 1.676163   7 4.790419 2.186576 167 0.3524 0.4300
```

```
(audityear_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=audityear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.6374, p-val = 0.4247
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.7570   0.4163   1.8185   0.0690  -0.0589   1.5728      .
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AUD - month

Replicated Effect

Hours per day

Study 1 - CANNOT CALCULATE

Study 2 - CANNOT CALCULATE

Hours per week

Study 1 - CANNOT CALCULATE

Study 2 - CANNOT CALCULATE

Days per week

Study 1 - CANNOT CALCULATE

Study 2 - CANNOT CALCULATE

MD

Hours per day - CANNOT CALCULATE

Hours per week - CANNOT CALCULATE

Days per week - CANNOT CALCULATE

Cannabis - discharge

Replicated Effect

Hours per day

Study 1

```
(vghrsday_cannabisdis_ds1 <- t.test(vghrsday ~ alcsuddis,
data=ds1canscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsuddis
## t = 0.12694, df = 50.83, p-value = 0.8995
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
```

```
##  -0.6667342  0.7567342
## sample estimates:
## mean in group 0 mean in group 1
##           1.925           1.880
```

Study 2

```
(vghrsday_cannabisdis_ds2 <- t.test(vghrsday ~ alcsuddis,
data=ds2canscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsuddis
## t = 1.7056, df = 122.37, p-value = 0.09063
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.1629379  2.1916520
## sample estimates:
## mean in group 0 mean in group 1
##        4.292135        3.277778
```

Hours per week

Study 1

```
(vghrsweek_cannabisdis_ds1 <- t.test(vghrsweek ~ alcsuddis,
data=ds1canscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsuddis
## t = -0.63036, df = 51.991, p-value = 0.5312
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -6.797929  3.547929
## sample estimates:
## mean in group 0 mean in group 1
##           9.775          11.400
```

Study 2

```
(vghrsweek_cannabisdis_ds2 <- t.test(vghrsweek ~ alcsuddis,
data=ds2canscreen))

##
##  Welch Two Sample t-test
```

```
##
## data:  vghrsweek by alcsuddis
## t = 1.4711, df = 122.99, p-value = 0.1438
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.017546 13.694824
## sample estimates:
## mean in group 0 mean in group 1
##        22.97753        17.13889
```

Days per week

Study 1

```
(vgdaysweek_cannabisdis_ds1 <- t.test(vgdaysweek ~ alcsuddis,
data=ds1canscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsuddis
## t = -1.7787, df = 57.666, p-value = 0.08057
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.0298917  0.1198917
## sample estimates:
## mean in group 0 mean in group 1
##           4.725           5.680
```

Study 2

```
(vgdaysweek_cannabisdis_ds2 <- t.test(vgdaysweek ~ alcsuddis,
data=ds2canscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsuddis
## t = -1.2, df = 66.834, p-value = 0.2344
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.4031763  0.3494934
## sample estimates:
## mean in group 0 mean in group 1
##        4.584270        5.111111
```

MD

Hours per day

```
#Study 1
cannabisdis_yes_ds1_vghrsday <- subset(cannabisdis_yes_ds1, select =
c(vghrsday)) #Subset 1i data
cannabisdis_vghrsday_m1i <- apply(cannabisdis_yes_ds1_vghrsday, 2, mean)
#Calculate m1i
cannabisdis_vghrsday_sd1i <- apply(cannabisdis_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
cannabisdis_vghrsday_n1i <- colSums(!is.na(cannabisdis_yes_ds1_vghrsday))
#Calculate n1i
cannabisdis_no_ds1_vghrsday <- subset(cannabisdis_no_ds1, select =
c(vghrsday)) #Subset 2i data
cannabisdis_vghrsday_m2i <- apply(cannabisdis_no_ds1_vghrsday, 2, mean)
#Calculate m2i
cannabisdis_vghrsday_sd2i <- apply(cannabisdis_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
cannabisdis_vghrsday_n2i <- colSums(!is.na(cannabisdis_no_ds1_vghrsday))
#Calculate n2i
ds1cannabisdis_meta <- data.frame(m1i = cannabisdis_vghrsday_m1i, sd1i =
cannabisdis_vghrsday_sd1i, n1i = cannabisdis_vghrsday_n1i, m2i =
cannabisdis_vghrsday_m2i, sd2i = cannabisdis_vghrsday_sd2i, n2i =
cannabisdis_vghrsday_n2i) #MA dataframe
ds1cannabisdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabisdis_meta)
#Calculate yi and vi

#Study 2
cannabisdis_yes_ds2_vghrsday <- subset(cannabisdis_yes_ds2, select =
c(vghrsday)) #Subset 1i data
cannabisdis_vghrsday_m1i <- apply(cannabisdis_yes_ds2_vghrsday, 2, mean)
#Calculate m1i
cannabisdis_vghrsday_sd1i <- apply(cannabisdis_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
cannabisdis_vghrsday_n1i <- colSums(!is.na(cannabisdis_yes_ds2_vghrsday))
#Calculate n1i
cannabisdis_no_ds2_vghrsday <- subset(cannabisdis_no_ds2, select =
c(vghrsday)) #Subset 2i data
cannabisdis_vghrsday_m2i <- apply(cannabisdis_no_ds2_vghrsday, 2, mean)
#Calculate m2i
cannabisdis_vghrsday_sd2i <- apply(cannabisdis_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
cannabisdis_vghrsday_n2i <- colSums(!is.na(cannabisdis_no_ds2_vghrsday))
#Calculate n2i
ds2cannabisdis_meta <- data.frame(m1i = cannabisdis_vghrsday_m1i, sd1i =
cannabisdis_vghrsday_sd1i, n1i = cannabisdis_vghrsday_n1i, m2i =
cannabisdis_vghrsday_m2i, sd2i = cannabisdis_vghrsday_sd2i, n2i =
cannabisdis_vghrsday_n2i) #MA dataframe
```

```
ds2cannabisdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabisdis_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabisdis_meta <- rbind(ds1cannabisdis_meta, ds2cannabisdis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 1.880000 1.394035  25 1.925000 1.384669  40 -0.0450 0.1257
## 2 3.277778 2.008711  36 4.292135 4.637305  89 -1.0144 0.3537

(cannabisdis_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabisdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 1.9602, p-val = 0.1615
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.2991   0.3045  -0.9823   0.3260  -0.8959   0.2977
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
cannabisdis_yes_ds1_vghrsweek <- subset(cannabisdis_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
cannabisdis_vghrsweek_m1i <- apply(cannabisdis_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
cannabisdis_vghrsweek_sd1i <- apply(cannabisdis_yes_ds1_vghrsweek, 2, sd)
#Calculate sd1i
cannabisdis_vghrsweek_n1i <- colSums(!
is.na(cannabisdis_yes_ds1_vghrsweek)) #Calculate n1i
cannabisdis_no_ds1_vghrsweek <- subset(cannabisdis_no_ds1, select =
c(vghrsweek)) #Subset 2i data
cannabisdis_vghrsweek_m2i <- apply(cannabisdis_no_ds1_vghrsweek, 2,
mean) #Calculate m2i
cannabisdis_vghrsweek_sd2i <- apply(cannabisdis_no_ds1_vghrsweek, 2, sd)
#Calculate sd2i
cannabisdis_vghrsweek_n2i <- colSums(!
is.na(cannabisdis_no_ds1_vghrsweek)) #Calculate n2i
ds1cannabisdis_meta <- data.frame(m1i = cannabisdis_vghrsweek_m1i, sd1i
= cannabisdis_vghrsweek_sd1i, n1i = cannabisdis_vghrsweek_n1i, m2i =
cannabisdis_vghrsweek_m2i, sd2i = cannabisdis_vghrsweek_sd2i, n2i =
```

```
cannabisdis_vghrsweek_n2i) #MA dataframe
ds1cannabisdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabisdis_meta)
#Calculate yi and vi

#Study 2
cannabisdis_yes_ds2_vghrsweek <- subset(cannabisdis_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
cannabisdis_vghrsweek_m1i <- apply(cannabisdis_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
cannabisdis_vghrsweek_sd1i <- apply(cannabisdis_yes_ds2_vghrsweek, 2, sd)
#Calculate sd1i
cannabisdis_vghrsweek_n1i <- colSums(!
is.na(cannabisdis_yes_ds2_vghrsweek)) #Calculate n1i
cannabisdis_no_ds2_vghrsweek <- subset(cannabisdis_no_ds2, select =
c(vghrsweek)) #Subset 2i data
cannabisdis_vghrsweek_m2i <- apply(cannabisdis_no_ds2_vghrsweek, 2,
mean) #Calculate m2i
cannabisdis_vghrsweek_sd2i <- apply(cannabisdis_no_ds2_vghrsweek, 2, sd)
#Calculate sd2i
cannabisdis_vghrsweek_n2i <- colSums(!
is.na(cannabisdis_no_ds2_vghrsweek)) #Calculate n2i
ds2cannabisdis_meta <- data.frame(m1i = cannabisdis_vghrsweek_m1i, sd1i
= cannabisdis_vghrsweek_sd1i, n1i = cannabisdis_vghrsweek_n1i, m2i =
cannabisdis_vghrsweek_m2i, sd2i = cannabisdis_vghrsweek_sd2i, n2i =
cannabisdis_vghrsweek_n2i) #MA dataframe
ds2cannabisdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabisdis_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabisdis_meta <- rbind(ds1cannabisdis_meta, ds2cannabisdis_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi      vi
## 1 11.40000 10.02081  25  9.77500 10.25442  40  1.6250  6.6455
## 2 17.13889 12.63816  36 22.97753 31.73433  89 -5.8386 15.7521

(cannabisdis_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabisdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.4871, p-val = 0.1148
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.5895   2.1619  -0.2727   0.7851  -4.8267   3.6477
##
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
cannabisdis_yes_ds1_vgdaysweek <- subset(cannabisdis_yes_ds1, select =
c(vgdaysweek)) #Subset 1i data
cannabisdis_vgdaysweek_m1i <- apply(cannabisdis_yes_ds1_vgdaysweek, 2,
mean) #Calculate m1i
cannabisdis_vgdaysweek_sd1i <- apply(cannabisdis_yes_ds1_vgdaysweek, 2,
sd) #Calculate sd1i
cannabisdis_vgdaysweek_n1i <- colSums(!
is.na(cannabisdis_yes_ds1_vgdaysweek)) #Calculate n1i
cannabisdis_no_ds1_vgdaysweek <- subset(cannabisdis_no_ds1, select =
c(vgdaysweek)) #Subset 2i data
cannabisdis_vgdaysweek_m2i <- apply(cannabisdis_no_ds1_vgdaysweek, 2,
mean) #Calculate m2i
cannabisdis_vgdaysweek_sd2i <- apply(cannabisdis_no_ds1_vgdaysweek, 2,
sd) #Calculate sd2i
cannabisdis_vgdaysweek_n2i <- colSums(!
is.na(cannabisdis_no_ds1_vgdaysweek)) #Calculate n2i
ds1cannabisdis_meta <- data.frame(m1i = cannabisdis_vgdaysweek_m1i,
sd1i = cannabisdis_vgdaysweek_sd1i, n1i = cannabisdis_vgdaysweek_n1i,
m2i = cannabisdis_vgdaysweek_m2i, sd2i = cannabisdis_vgdaysweek_sd2i,
n2i = cannabisdis_vgdaysweek_n2i) #MA dataframe
ds1cannabisdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabisdis_meta)
#Calculate yi and vi

#Study 2
cannabisdis_yes_ds2_vgdaysweek <- subset(cannabisdis_yes_ds2, select =
c(vgdaysweek)) #Subset 1i data
cannabisdis_vgdaysweek_m1i <- apply(cannabisdis_yes_ds2_vgdaysweek, 2,
mean) #Calculate m1i
cannabisdis_vgdaysweek_sd1i <- apply(cannabisdis_yes_ds2_vgdaysweek, 2,
sd) #Calculate sd1i
cannabisdis_vgdaysweek_n1i <- colSums(!
is.na(cannabisdis_yes_ds2_vgdaysweek)) #Calculate n1i
cannabisdis_no_ds2_vgdaysweek <- subset(cannabisdis_no_ds2, select =
c(vgdaysweek)) #Subset 2i data
cannabisdis_vgdaysweek_m2i <- apply(cannabisdis_no_ds2_vgdaysweek, 2,
mean) #Calculate m2i
cannabisdis_vgdaysweek_sd2i <- apply(cannabisdis_no_ds2_vgdaysweek, 2,
sd) #Calculate sd2i
cannabisdis_vgdaysweek_n2i <- colSums(!
is.na(cannabisdis_no_ds2_vgdaysweek)) #Calculate n2i
ds2cannabisdis_meta <- data.frame(m1i = cannabisdis_vgdaysweek_m1i,
sd1i = cannabisdis_vgdaysweek_sd1i, n1i = cannabisdis_vgdaysweek_n1i,
```

```
m2i = cannabisdis_vgdaysweek_m2i, sd2i = cannabisdis_vgdaysweek_sd2i,
n2i = cannabisdis_vgdaysweek_n2i) #MA dataframe
ds2cannabisdis_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabisdis_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabisdis_meta <- rbind(ds1cannabisdis_meta, ds2cannabisdis_meta))

##       m1i     sd1i n1i     m2i     sd2i n2i     yi     vi
## 1 5.680000 1.951922  25 4.72500 2.331364  40 0.9550 0.2883
## 2 5.111111 2.201010  36 4.58427 2.275407  89 0.5268 0.1927

(cannabisdis_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabisdis_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 0.3811, p-val = 0.5370
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.6984   0.3399   2.0549   0.0399   0.0323   1.3645      *
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Cannabis - year

Replicated Effect

Hours per day

Study 1

```
(vghrsday_cannabisyear_ds1 <- t.test(vghrsday ~ alcsudyear,
data=ds1canscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsudyear
## t = 0.30367, df = 23.968, p-value = 0.764
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
```

```
##  -0.7320251  0.9845761
## sample estimates:
## mean in group 0 mean in group 1
##       1.938776       1.812500
```

Study 2

```
(vghrsday_cannabisyear_ds2 <- t.test(vghrsday ~ alcsudyear,
data=ds2canscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsudyear
## t = 2.1796, df = 76.735, p-value = 0.03235
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.1087565 2.4095586
## sample estimates:
## mean in group 0 mean in group 1
##       4.211538       2.952381
```

Hours per week

Study 1

```
(vghrsweek_cannabisyear_ds1 <- t.test(vghrsweek ~ alcsudyear,
data=ds1canscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsudyear
## t = -0.41554, df = 25.829, p-value = 0.6812
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -7.200108  4.779190
## sample estimates:
## mean in group 0 mean in group 1
##       10.10204       11.31250
```

Study 2

```
(vghrsweek_cannabisyear_ds2 <- t.test(vghrsweek ~ alcsudyear,
data=ds2canscreen))

##
##  Welch Two Sample t-test
```

```
##
## data:  vghrsweek by alcsudyear
## t = 2.0802, df = 64.431, p-value = 0.04149
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##   0.3443176 16.9652062
## sample estimates:
## mean in group 0 mean in group 1
##        22.75000        14.09524
```

Days per week

Study 1

```
(vgdaysweek_cannabisyear_ds1 <- t.test(vgdaysweek ~ alcsudyear,
data=ds1canscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsudyear
## t = -2.467, df = 36.915, p-value = 0.01839
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -2.3441132 -0.2298664
## sample estimates:
## mean in group 0 mean in group 1
##         4.77551         6.06250
```

Study 2

```
(vgdaysweek_cannabisyear_ds2 <- t.test(vgdaysweek ~ alcsudyear,
data=ds2canscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsudyear
## t = 0.64639, df = 27.298, p-value = 0.5234
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.8028169  1.5418279
## sample estimates:
## mean in group 0 mean in group 1
##        4.798077        4.428571
```

MD

Hours per day

```
#Study 1
cannabisyear_yes_ds1_vghrsday <- subset(cannabisyear_yes_ds1, select =
c(vghrsday)) #Subset 1i data
cannabisyear_vghrsday_m1i <- apply(cannabisyear_yes_ds1_vghrsday, 2,
mean) #Calculate m1i
cannabisyear_vghrsday_sd1i <- apply(cannabisyear_yes_ds1_vghrsday, 2, sd)
#Calculate sd1i
cannabisyear_vghrsday_n1i <- colSums(!
is.na(cannabisyear_yes_ds1_vghrsday)) #Calculate n1i
cannabisyear_no_ds1_vghrsday <- subset(cannabisyear_no_ds1, select =
c(vghrsday)) #Subset 2i data
cannabisyear_vghrsday_m2i <- apply(cannabisyear_no_ds1_vghrsday, 2,
mean) #Calculate m2i
cannabisyear_vghrsday_sd2i <- apply(cannabisyear_no_ds1_vghrsday, 2, sd)
#Calculate sd2i
cannabisyear_vghrsday_n2i <- colSums(!
is.na(cannabisyear_no_ds1_vghrsday)) #Calculate n2i
ds1cannabisyear_meta <- data.frame(m1i = cannabisyear_vghrsday_m1i,
sd1i = cannabisyear_vghrsday_sd1i, n1i = cannabisyear_vghrsday_n1i, m2i =
cannabisyear_vghrsday_m2i, sd2i = cannabisyear_vghrsday_sd2i, n2i =
cannabisyear_vghrsday_n2i) #MA dataframe
ds1cannabisyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabisyear_meta)
#Calculate yi and vi

#Study 2
cannabisyear_yes_ds2_vghrsday <- subset(cannabisyear_yes_ds2, select =
c(vghrsday)) #Subset 1i data
cannabisyear_vghrsday_m1i <- apply(cannabisyear_yes_ds2_vghrsday, 2,
mean) #Calculate m1i
cannabisyear_vghrsday_sd1i <- apply(cannabisyear_yes_ds2_vghrsday, 2, sd)
#Calculate sd1i
cannabisyear_vghrsday_n1i <- colSums(!
is.na(cannabisyear_yes_ds2_vghrsday)) #Calculate n1i
cannabisyear_no_ds2_vghrsday <- subset(cannabisyear_no_ds2, select =
c(vghrsday)) #Subset 2i data
cannabisyear_vghrsday_m2i <- apply(cannabisyear_no_ds2_vghrsday, 2,
mean) #Calculate m2i
cannabisyear_vghrsday_sd2i <- apply(cannabisyear_no_ds2_vghrsday, 2, sd)
#Calculate sd2i
cannabisyear_vghrsday_n2i <- colSums(!
is.na(cannabisyear_no_ds2_vghrsday)) #Calculate n2i
ds2cannabisyear_meta <- data.frame(m1i = cannabisyear_vghrsday_m1i,
sd1i = cannabisyear_vghrsday_sd1i, n1i = cannabisyear_vghrsday_n1i, m2i =
cannabisyear_vghrsday_m2i, sd2i = cannabisyear_vghrsday_sd2i, n2i =
cannabisyear_vghrsday_n2i) #MA dataframe
```

```
ds2cannabisyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabisyear_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabisyear_meta <- rbind(ds1cannabisyear_meta,
ds2cannabisyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 1.812500 1.470544  16 1.938776 1.360272  49 -0.1263 0.1729
## 2 2.952381 1.774153  21 4.211538 4.372627 104 -1.2592 0.3337

(cannabisyear_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabisyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 2.5332, p-val = 0.1115
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.5129   0.3375  -1.5198   0.1286  -1.1744   0.1485
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
cannabisyear_yes_ds1_vghrsweek <- subset(cannabisyear_yes_ds1, select =
c(vghrsweek)) #Subset 1i data
cannabisyear_vghrsweek_m1i <- apply(cannabisyear_yes_ds1_vghrsweek, 2,
mean) #Calculate m1i
cannabisyear_vghrsweek_sd1i <- apply(cannabisyear_yes_ds1_vghrsweek, 2,
sd) #Calculate sd1i
cannabisyear_vghrsweek_n1i <- colSums(!
is.na(cannabisyear_yes_ds1_vghrsweek)) #Calculate n1i
cannabisyear_no_ds1_vghrsweek <- subset(cannabisyear_no_ds1, select =
c(vghrsweek)) #Subset 2i data
cannabisyear_vghrsweek_m2i <- apply(cannabisyear_no_ds1_vghrsweek, 2,
mean) #Calculate m2i
cannabisyear_vghrsweek_sd2i <- apply(cannabisyear_no_ds1_vghrsweek, 2,
sd) #Calculate sd2i
cannabisyear_vghrsweek_n2i <- colSums(!
is.na(cannabisyear_no_ds1_vghrsweek)) #Calculate n2i
ds1cannabisyear_meta <- data.frame(m1i = cannabisyear_vghrsweek_m1i,
sd1i = cannabisyear_vghrsweek_sd1i, n1i = cannabisyear_vghrsweek_n1i,
```

```
m2i = cannabisyear_vghrsweek_m2i, sd2i = cannabisyear_vghrsweek_sd2i,
n2i = cannabisyear_vghrsweek_n2i) #MA dataframe
ds1cannabisyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabisyear_meta)
#Calculate yi and vi

#Study 2
cannabisyear_yes_ds2_vghrsweek <- subset(cannabisyear_yes_ds2, select =
c(vghrsweek)) #Subset 1i data
cannabisyear_vghrsweek_m1i <- apply(cannabisyear_yes_ds2_vghrsweek, 2,
mean) #Calculate m1i
cannabisyear_vghrsweek_sd1i <- apply(cannabisyear_yes_ds2_vghrsweek, 2,
sd) #Calculate sd1i
cannabisyear_vghrsweek_n1i <- colSums(!
is.na(cannabisyear_yes_ds2_vghrsweek)) #Calculate n1i
cannabisyear_no_ds2_vghrsweek <- subset(cannabisyear_no_ds2, select =
c(vghrsweek)) #Subset 2i data
cannabisyear_vghrsweek_m2i <- apply(cannabisyear_no_ds2_vghrsweek, 2,
mean) #Calculate m2i
cannabisyear_vghrsweek_sd2i <- apply(cannabisyear_no_ds2_vghrsweek, 2,
sd) #Calculate sd2i
cannabisyear_vghrsweek_n2i <- colSums(!
is.na(cannabisyear_no_ds2_vghrsweek)) #Calculate n2i
ds2cannabisyear_meta <- data.frame(m1i = cannabisyear_vghrsweek_m1i,
sd1i = cannabisyear_vghrsweek_sd1i, n1i = cannabisyear_vghrsweek_n1i,
m2i = cannabisyear_vghrsweek_m2i, sd2i = cannabisyear_vghrsweek_sd2i,
n2i = cannabisyear_vghrsweek_n2i) #MA dataframe
ds2cannabisyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabisyear_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabisyear_meta <- rbind(ds1cannabisyear_meta,
ds2cannabisyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi      vi
## 1 11.31250 10.08444  16 10.10204 10.21487  49  1.2105  8.4854
## 2 14.09524 13.67445  21 22.75000 29.56604 104 -8.6548 17.3096

(cannabisyear_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabisyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 3.7729, p-val = 0.0521
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
```

```
##  -2.0348   2.3862  -0.8527   0.3938  -6.7117   2.6422
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Days per week

```
#Study 1
cannabisyear_yes_ds1_vgdaysweek <- subset(cannabisyear_yes_ds1, select = c(vgdaysweek)) #Subset 1i data
cannabisyear_vgdaysweek_m1i <- apply(cannabisyear_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
cannabisyear_vgdaysweek_sd1i <- apply(cannabisyear_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
cannabisyear_vgdaysweek_n1i <- colSums(!is.na(cannabisyear_yes_ds1_vgdaysweek)) #Calculate n1i
cannabisyear_no_ds1_vgdaysweek <- subset(cannabisyear_no_ds1, select = c(vgdaysweek)) #Subset 2i data
cannabisyear_vgdaysweek_m2i <- apply(cannabisyear_no_ds1_vgdaysweek, 2, mean) #Calculate m2i
cannabisyear_vgdaysweek_sd2i <- apply(cannabisyear_no_ds1_vgdaysweek, 2, sd) #Calculate sd2i
cannabisyear_vgdaysweek_n2i <- colSums(!is.na(cannabisyear_no_ds1_vgdaysweek)) #Calculate n2i
ds1cannabisyear_meta <- data.frame(m1i = cannabisyear_vgdaysweek_m1i, sd1i = cannabisyear_vgdaysweek_sd1i, n1i = cannabisyear_vgdaysweek_n1i, m2i = cannabisyear_vgdaysweek_m2i, sd2i = cannabisyear_vgdaysweek_sd2i, n2i = cannabisyear_vgdaysweek_n2i) #MA dataframe
ds1cannabisyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabisyear_meta) #Calculate yi and vi

#Study 2
cannabisyear_yes_ds2_vgdaysweek <- subset(cannabisyear_yes_ds2, select = c(vgdaysweek)) #Subset 1i data
cannabisyear_vgdaysweek_m1i <- apply(cannabisyear_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
cannabisyear_vgdaysweek_sd1i <- apply(cannabisyear_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
cannabisyear_vgdaysweek_n1i <- colSums(!is.na(cannabisyear_yes_ds2_vgdaysweek)) #Calculate n1i
cannabisyear_no_ds2_vgdaysweek <- subset(cannabisyear_no_ds2, select = c(vgdaysweek)) #Subset 2i data
cannabisyear_vgdaysweek_m2i <- apply(cannabisyear_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
cannabisyear_vgdaysweek_sd2i <- apply(cannabisyear_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
cannabisyear_vgdaysweek_n2i <- colSums(!
```

```
is.na(cannabisyear_no_ds2_vgdaysweek)) #Calculate n2i
ds2cannabisyear_meta <- data.frame(m1i = cannabisyear_vgdaysweek_m1i,
sd1i = cannabisyear_vgdaysweek_sd1i, n1i = cannabisyear_vgdaysweek_n1i,
m2i = cannabisyear_vgdaysweek_m2i, sd2i =
cannabisyear_vgdaysweek_sd2i, n2i = cannabisyear_vgdaysweek_n2i) #MA
dataframe
ds2cannabisyear_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i
= n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabisyear_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabisyear_meta <- rbind(ds1cannabisyear_meta,
ds2cannabisyear_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1 6.062500 1.611159  16 4.775510 2.320787  49  1.2870 0.2722
## 2 4.428571 2.420153  21 4.798077 2.231199 104 -0.3695 0.3268

(cannabisyear_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabisyear_meta))

##
## Fixed-Effects Model (k = 2)
##
## Test for Heterogeneity:
## Q(df = 1) = 4.5814, p-val = 0.0323
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.5343   0.3853   1.3865   0.1656  -0.2210   1.2895
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Cannabis - month

Replicated Effect

Hours per day

Study 1 - CANNOT CALCULATE

Study 2

```
(vghrsday_cannabismonth_ds2 <- t.test(vghrsday ~ alcsudmonth,
data=ds2canscreen))
```

```
##
##  Welch Two Sample t-test
##
## data:  vghrsday by alcsudmonth
## t = 0.91169, df = 8.7714, p-value = 0.3863
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.044242  2.444802
## sample estimates:
## mean in group 0 mean in group 1
##        4.033613        3.333333
```

Hours per week

Study 1 - CANNOT CALCULATE

Study 2

```
(vghrsweek_cannabismonth_ds2 <- t.test(vghrsweek ~ alcsudmonth,
data=ds2canscreen))

##
##  Welch Two Sample t-test
##
## data:  vghrsweek by alcsudmonth
## t = 0.66748, df = 7.9026, p-value = 0.5235
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -9.386757 17.011406
## sample estimates:
## mean in group 0 mean in group 1
##        21.47899        17.66667
```

Days per week

Study 1 - CANNOT CALCULATE

Study 2

```
(vgdaysweek_cannabismonth_ds2 <- t.test(vgdaysweek ~ alcsudmonth,
data=ds2canscreen))

##
##  Welch Two Sample t-test
##
## data:  vgdaysweek by alcsudmonth
## t = -0.29073, df = 5.5096, p-value = 0.7819
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
```

```
##  -2.662564  2.107942
## sample estimates:
## mean in group 0 mean in group 1
##       4.722689       5.000000
```

MD

Hours per day

```
#Study 1
cannabismonth_yes_ds1_vghrsday <- subset(cannabismonth_yes_ds1, select = c(vghrsday)) #Subset 1i data
cannabismonth_vghrsday_m1i <- apply(cannabismonth_yes_ds1_vghrsday, 2, mean) #Calculate m1i
cannabismonth_vghrsday_sd1i <- apply(cannabismonth_yes_ds1_vghrsday, 2, sd) #Calculate sd1i
cannabismonth_vghrsday_n1i <- colSums(!is.na(cannabismonth_yes_ds1_vghrsday)) #Calculate n1i
cannabismonth_no_ds1_vghrsday <- subset(cannabismonth_no_ds1, select = c(vghrsday)) #Subset 2i data
cannabismonth_vghrsday_m2i <- apply(cannabismonth_no_ds1_vghrsday, 2, mean) #Calculate m2i
cannabismonth_vghrsday_sd2i <- apply(cannabismonth_no_ds1_vghrsday, 2, sd) #Calculate sd2i
cannabismonth_vghrsday_n2i <- colSums(!is.na(cannabismonth_no_ds1_vghrsday)) #Calculate n2i
ds1cannabismonth_meta <- data.frame(m1i = cannabismonth_vghrsday_m1i, sd1i = cannabismonth_vghrsday_sd1i, n1i = cannabismonth_vghrsday_n1i, m2i = cannabismonth_vghrsday_m2i, sd2i = cannabismonth_vghrsday_sd2i, n2i = cannabismonth_vghrsday_n2i) #MA dataframe
ds1cannabismonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i, n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabismonth_meta) #Calculate yi and vi

#Study 2
cannabismonth_yes_ds2_vghrsday <- subset(cannabismonth_yes_ds2, select = c(vghrsday)) #Subset 1i data
cannabismonth_vghrsday_m1i <- apply(cannabismonth_yes_ds2_vghrsday, 2, mean) #Calculate m1i
cannabismonth_vghrsday_sd1i <- apply(cannabismonth_yes_ds2_vghrsday, 2, sd) #Calculate sd1i
cannabismonth_vghrsday_n1i <- colSums(!is.na(cannabismonth_yes_ds2_vghrsday)) #Calculate n1i
cannabismonth_no_ds2_vghrsday <- subset(cannabismonth_no_ds2, select = c(vghrsday)) #Subset 2i data
cannabismonth_vghrsday_m2i <- apply(cannabismonth_no_ds2_vghrsday, 2, mean) #Calculate m2i
cannabismonth_vghrsday_sd2i <- apply(cannabismonth_no_ds2_vghrsday, 2,
```

```
sd) #Calculate sd2i
cannabismonth_vghrsday_n2i <- colSums(!
is.na(cannabismonth_no_ds2_vghrsday)) #Calculate n2i
ds2cannabismonth_meta <- data.frame(m1i =
cannabismonth_vghrsday_m1i, sd1i = cannabismonth_vghrsday_sd1i, n1i =
cannabismonth_vghrsday_n1i, m2i = cannabismonth_vghrsday_m2i, sd2i =
cannabismonth_vghrsday_sd2i, n2i = cannabismonth_vghrsday_n2i) #MA
dataframe
ds2cannabismonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabismonth_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabismonth_meta <- rbind(ds1cannabismonth_meta,
ds2cannabismonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi     vi
## 1     NaN       NA   0 1.907692 1.377533  65      NA     NA
## 2 3.333333 1.632993   6 4.033613 4.161838 119 -0.7003 0.5900

(cannabismonth_vghrsday_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabismonth_meta))

##
## Fixed-Effects Model (k = 1)
##
## Test for Heterogeneity:
## Q(df = 0) = 0.0000, p-val = 1.0000
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -0.7003   0.7681  -0.9117   0.3619  -2.2058   0.8052
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

'

Hours per week

```
#Study 1
cannabismonth_yes_ds1_vghrsweek <- subset(cannabismonth_yes_ds1,
select = c(vghrsweek)) #Subset 1i data
cannabismonth_vghrsweek_m1i <-
apply(cannabismonth_yes_ds1_vghrsweek, 2, mean) #Calculate m1i
cannabismonth_vghrsweek_sd1i <-
apply(cannabismonth_yes_ds1_vghrsweek, 2, sd) #Calculate sd1i
cannabismonth_vghrsweek_n1i <- colSums(!
is.na(cannabismonth_yes_ds1_vghrsweek)) #Calculate n1i
cannabismonth_no_ds1_vghrsweek <- subset(cannabismonth_no_ds1, select
= c(vghrsweek)) #Subset 2i data
```

```
cannabismonth_vghrsweek_m2i <- apply(cannabismonth_no_ds1_vghrsweek,
2, mean) #Calculate m2i
cannabismonth_vghrsweek_sd2i <- apply(cannabismonth_no_ds1_vghrsweek,
2, sd) #Calculate sd2i
cannabismonth_vghrsweek_n2i <- colSums(!
is.na(cannabismonth_no_ds1_vghrsweek)) #Calculate n2i
ds1cannabismonth_meta <- data.frame(m1i =
cannabismonth_vghrsweek_m1i, sd1i = cannabismonth_vghrsweek_sd1i, n1i
= cannabismonth_vghrsweek_n1i, m2i = cannabismonth_vghrsweek_m2i,
sd2i = cannabismonth_vghrsweek_sd2i, n2i =
cannabismonth_vghrsweek_n2i) #MA dataframe
ds1cannabismonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabismonth_meta)
#Calculate yi and vi

#Study 2
cannabismonth_yes_ds2_vghrsweek <- subset(cannabismonth_yes_ds2,
select = c(vghrsweek)) #Subset 1i data
cannabismonth_vghrsweek_m1i <-
apply(cannabismonth_yes_ds2_vghrsweek, 2, mean) #Calculate m1i
cannabismonth_vghrsweek_sd1i <-
apply(cannabismonth_yes_ds2_vghrsweek, 2, sd) #Calculate sd1i
cannabismonth_vghrsweek_n1i <- colSums(!
is.na(cannabismonth_yes_ds2_vghrsweek)) #Calculate n1i
cannabismonth_no_ds2_vghrsweek <- subset(cannabismonth_no_ds2, select
= c(vghrsweek)) #Subset 2i data
cannabismonth_vghrsweek_m2i <- apply(cannabismonth_no_ds2_vghrsweek,
2, mean) #Calculate m2i
cannabismonth_vghrsweek_sd2i <- apply(cannabismonth_no_ds2_vghrsweek,
2, sd) #Calculate sd2i
cannabismonth_vghrsweek_n2i <- colSums(!
is.na(cannabismonth_no_ds2_vghrsweek)) #Calculate n2i
ds2cannabismonth_meta <- data.frame(m1i =
cannabismonth_vghrsweek_m1i, sd1i = cannabismonth_vghrsweek_sd1i, n1i
= cannabismonth_vghrsweek_n1i, m2i = cannabismonth_vghrsweek_m2i,
sd2i = cannabismonth_vghrsweek_sd2i, n2i =
cannabismonth_vghrsweek_n2i) #MA dataframe
ds2cannabismonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabismonth_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabismonth_meta <- rbind(ds1cannabismonth_meta,
ds2cannabismonth_meta))

##       m1i     sd1i n1i      m2i     sd2i n2i      yi      vi
## 1     NaN       NA   0 10.40000 10.11774  65      NA      NA
## 2 17.66667 12.46863   6 21.47899 28.25815 119 -3.8123 32.6214
```

```
(cannabismonth_vghrsweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabismonth_meta))

##
## Fixed-Effects Model (k = 1)
##
## Test for Heterogeneity:
## Q(df = 0) = 0.0000, p-val = 1.0000
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##  -3.8123   5.7115  -0.6675   0.5045 -15.0067   7.3820
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

Days per week

```
#Study 1
cannabismonth_yes_ds1_vgdaysweek <- subset(cannabismonth_yes_ds1,
select = c(vgdaysweek)) #Subset 1i data
cannabismonth_vgdaysweek_m1i <-
apply(cannabismonth_yes_ds1_vgdaysweek, 2, mean) #Calculate m1i
cannabismonth_vgdaysweek_sd1i <-
apply(cannabismonth_yes_ds1_vgdaysweek, 2, sd) #Calculate sd1i
cannabismonth_vgdaysweek_n1i <- colSums(!
is.na(cannabismonth_yes_ds1_vgdaysweek)) #Calculate n1i
cannabismonth_no_ds1_vgdaysweek <- subset(cannabismonth_no_ds1,
select = c(vgdaysweek)) #Subset 2i data
cannabismonth_vgdaysweek_m2i <-
apply(cannabismonth_no_ds1_vgdaysweek, 2, mean) #Calculate m2i
cannabismonth_vgdaysweek_sd2i <-
apply(cannabismonth_no_ds1_vgdaysweek, 2, sd) #Calculate sd2i
cannabismonth_vgdaysweek_n2i <- colSums(!
is.na(cannabismonth_no_ds1_vgdaysweek)) #Calculate n2i
ds1cannabismonth_meta <- data.frame(m1i =
cannabismonth_vgdaysweek_m1i, sd1i = cannabismonth_vgdaysweek_sd1i,
n1i = cannabismonth_vgdaysweek_n1i, m2i =
cannabismonth_vgdaysweek_m2i, sd2i = cannabismonth_vgdaysweek_sd2i,
n2i = cannabismonth_vgdaysweek_n2i) #MA dataframe
ds1cannabismonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds1cannabismonth_meta)
#Calculate yi and vi

#Study 2
cannabismonth_yes_ds2_vgdaysweek <- subset(cannabismonth_yes_ds2,
select = c(vgdaysweek)) #Subset 1i data
cannabismonth_vgdaysweek_m1i <-
```

```
apply(cannabismonth_yes_ds2_vgdaysweek, 2, mean) #Calculate m1i
cannabismonth_vgdaysweek_sd1i <-
apply(cannabismonth_yes_ds2_vgdaysweek, 2, sd) #Calculate sd1i
cannabismonth_vgdaysweek_n1i <- colSums(!
is.na(cannabismonth_yes_ds2_vgdaysweek)) #Calculate n1i
cannabismonth_no_ds2_vgdaysweek <- subset(cannabismonth_no_ds2,
select = c(vgdaysweek)) #Subset 2i data
cannabismonth_vgdaysweek_m2i <-
apply(cannabismonth_no_ds2_vgdaysweek, 2, mean) #Calculate m2i
cannabismonth_vgdaysweek_sd2i <-
apply(cannabismonth_no_ds2_vgdaysweek, 2, sd) #Calculate sd2i
cannabismonth_vgdaysweek_n2i <- colSums(!
is.na(cannabismonth_no_ds2_vgdaysweek)) #Calculate n2i
ds2cannabismonth_meta <- data.frame(m1i =
cannabismonth_vgdaysweek_m1i, sd1i = cannabismonth_vgdaysweek_sd1i,
n1i = cannabismonth_vgdaysweek_n1i, m2i =
cannabismonth_vgdaysweek_m2i, sd2i = cannabismonth_vgdaysweek_sd2i,
n2i = cannabismonth_vgdaysweek_n2i) #MA dataframe
ds2cannabismonth_meta <- escalc(measure="MD", m1i = m1i, sd1i = sd1i,
n1i = n1i, m2i = m2i, sd2i = sd2i, n2i = n2i, data=ds2cannabismonth_meta)
#Calculate yi and vi

#FE meta-analysis
(cannabismonth_meta <- rbind(ds1cannabismonth_meta,
ds2cannabismonth_meta))

##   m1i     sd1i n1i      m2i     sd2i n2i     yi     vi
## 1 NaN       NA   0 5.092308 2.227127  65     NA     NA
## 2   5 2.280351   6 4.722689 2.265902 119 0.2773 0.9098

(cannabismonth_vgdaysweek_meta <- rma(yi=yi, vi=vi, measure="MD",
method="FE", data=cannabismonth_meta))

##
## Fixed-Effects Model (k = 1)
##
## Test for Heterogeneity:
## Q(df = 0) = 0.0000, p-val = 1.0000
##
## Model Results:
##
## estimate      se     zval     pval    ci.lb    ci.ub
##   0.2773   0.9538   0.2907   0.7713  -1.5922   2.1468
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```