

Supplement

Meike Vösgen-Nordloh

Pawel R. Kulawiak

Tijs Bolz

meike.voegen@uni-koeln.de

Thomas Hennemann

Helma M. Y. Koomen

Tatjana Leidig

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1 Online: <https://pawelkulawiak.github.io/tsrsupplement/>

1.1 R packages

Effect Size Computation for Meta Analysis [1]

```
library(esc)
```

1.2 Table 2: Mean differences between dyadic TSR-quality in students with and without EBPs

1.2.1 Al-Yagon (2016)

<https://doi.org/10.1177/0022219415620569>

```
# Teacher's availability (TD > EP) (Group C > Group B) (n.s.)
esc_mean_sd(
  grp1m = 76.98,
  grp1sd = 22.53,
  grp1n = 91,
  grp2m = 79.60,
  grp2sd = 20.24,
  grp2n = 99,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: -0.1226
Standard Error: 0.1454
Variance: 0.0211
Lower CI: -0.4075
Upper CI: 0.1623
Weight: 47.3270
```

```
# Teacher's rejection (EP > TD) (Group B > Group C) (n.s.)
```

```
esc_mean_sd(
  grp1m = 17.10,
  grp1sd = 9.92,
  grp1n = 91,
  grp2m = 14.29,
  grp2sd = 7.94,
  grp2n = 99,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: 0.3142
Standard Error: 0.1461
Variance: 0.0213
Lower CI: 0.0278
Upper CI: 0.6006
Weight: 46.8387
```

1.2.2 Baker et al. (2009)

<https://doi.org/10.1177/0143034309106945>

```
# Authoritative teaching (TD > EP) (Typical group > Externalizing group) (statistical
significance not reported)
```

```
esc_mean_sd(
  grp1m = 26.83,
  grp1sd = 9.68,
  grp1n = 174,
  grp2m = 29.04,
  grp2sd = 8.18,
  grp2n = 519,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: -0.2576
Standard Error: 0.0879
Variance: 0.0077
Lower CI: -0.4298
```

Upper CI: -0.0853
Weight: 129.5039

1.2.3 Henricsson & Rydell (2004)

<https://doi.org/10.1353/mpq.2004.0012>

```
# Child report (IP > TD) (INT > PF) (n.s.)
esc_mean_se(
  grp1m = 1.51,
  grp1se = .08,
  grp1n = 21 + 23,
  grp2m = 1.52,
  grp2se = .11,
  grp2n = 8 + 17,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and se to effect size d
Effect Size: -0.0189
Standard Error: 0.2505
Variance: 0.0627
Lower CI: -0.5098
Upper CI: 0.4720
Weight: 15.9414
```

```
# Child report (EP > TD) (EXT > PF) (* p < .05)
esc_mean_se(
  grp1m = 1.51,
  grp1se = .08,
  grp1n = 21 + 23,
  grp2m = 1.82,
  grp2se = .11,
  grp2n = 20 + 6,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and se to effect size d
Effect Size: -0.5804
Standard Error: 0.2522
Variance: 0.0636
Lower CI: -1.0747
Upper CI: -0.0862
Weight: 15.7244
```

```
# Conflict (IP > TD) (INT > PF) (** p < .01)
esc_mean_se(
  grp1m = 1.25,
  grp1se = .08,
  grp1n = 21 + 23,
  grp2m = 1.61,
```

```

grp2se = .10,
grp2n = 8 + 17,
es.type = "d")

```

Effect Size Calculation for Meta Analysis

```

Conversion: mean and se to effect size d
Effect Size: -0.7025
Standard Error: 0.2575
Variance: 0.0663
Lower CI: -1.2072
Upper CI: -0.1978
Weight: 15.0821

```

```

# Conflict (EP > TD) (EXT > PF) (***) p < .001
esc_mean_se(
  grp1m = 1.25,
  grp1se = .08,
  grp1n = 21 + 23,
  grp2m = 2.29,
  grp2se = .10,
  grp2n = 20 + 6,
  es.type = "d")

```

Effect Size Calculation for Meta Analysis

```

Conversion: mean and se to effect size d
Effect Size: -2.0167
Standard Error: 0.3004
Variance: 0.0902
Lower CI: -2.6055
Upper CI: -1.4279
Weight: 11.0816

```

```

# Closeness (TD > IP) (PF > INT) (* p < .05)
esc_mean_se(
  grp1m = 4.19,
  grp1se = .08,
  grp1n = 21 + 23,
  grp2m = 3.95,
  grp2se = .10,
  grp2n = 8 + 17,
  es.type = "d")

```

Effect Size Calculation for Meta Analysis

```

Conversion: mean and se to effect size d
Effect Size: 0.4684
Standard Error: 0.2536
Variance: 0.0643
Lower CI: -0.0287

```

Upper CI: 0.9654
Weight: 15.5480

```
# Closeness (TD > EP) (EXT > PF) (n.s.)
esc_mean_se(
  grp1m = 4.19,
  grp1se = .08,
  grp1n = 21 + 23,
  grp2m = 4.12,
  grp2se = .10,
  grp2n = 20 + 6,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

Conversion: mean and se to effect size d
Effect Size: 0.1357
Standard Error: 0.2476
Variance: 0.0613
Lower CI: -0.3496
Upper CI: 0.6211
Weight: 16.3078

```
# Dependency (IP > TD) (INT > PF) (***) p < .001
esc_mean_se(
  grp1m = 1.63,
  grp1se = .10,
  grp1n = 21 + 23,
  grp2m = 2.26,
  grp2se = .14,
  grp2n = 8 + 17,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

Conversion: mean and se to effect size d
Effect Size: -0.9450
Standard Error: 0.2631
Variance: 0.0692
Lower CI: -1.4605
Upper CI: -0.4294
Weight: 14.4513

```
# Dependency (EP > TD) (EXT > PF) (***) p < .001
esc_mean_se(
  grp1m = 1.63,
  grp1se = .10,
  grp1n = 21 + 23,
  grp2m = 2.33,
  grp2se = .14,
  grp2n = 20 + 6,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

Conversion: mean and se to effect size d
Effect Size: -1.0411
Standard Error: 0.2625
Variance: 0.0689
Lower CI: -1.5557
Upper CI: -0.5265
Weight: 14.5072

1.2.4 Little & Kobak (2003)

https://doi.org/10.1207/S15374424JCCP3201_12

```
# negative teacher events (SEBD > TD) (SED > Comparison) (** p < .001)
esc_mean_sd(
  grp1m = 0.96,
  grp1sd = 1.15, # From Table 1 (total sample SD)
  grp1n = 40,
  grp2m = 2.06,
  grp2sd = 1.15, # From Table 1 (total sample SD)
  grp2n = 20,
  es.type = "d")

# positive teacher events (SEBD > TD) (SED > Comparison) (n.s.)
esc_mean_sd(
  grp1m = 2.76,
  grp1sd = 0.74, # From Table 1 (total sample SD)
  grp1n = 40,
  grp2m = 2.88,
  grp2sd = 0.74, # From Table 1 (total sample SD)
  grp2n = 20,
  es.type = "d")

# worst day event involving the teacher (SEBD > TD) (SED > Comparison) (** p < .01)
esc_mean_sd(
  grp1m = 0.09,
  grp1sd = .20, # From Table 1 (total sample SD)
  grp1n = 40,
  grp2m = 0.26,
  grp2sd = .20, # From Table 1 (total sample SD)
  grp2n = 20,
  es.type = "d")

# best day event involving the teacher (SEBD > TD) (SED > Comparison) (n.s.)
esc_mean_sd(
  grp1m = 0.03,
  grp1sd = 0.09, # From Table 1 (total sample SD)
  grp1n = 40,
  grp2m = 0.05,
  grp2sd = 0.09, # From Table 1 (total sample SD)
  grp2n = 20,
  es.type = "d")
```

1.2.5 Longobardi et al. (2019)

<https://doi.org/10.1002/pits.22175>

```

# Warmth (TD > IP) (without SM > with SM) (n.s.)
esc_mean_sd(
  grp1m = 0.83,
  grp1sd = 0.14,
  grp1n = 15,
  grp2m = 0.87,
  grp2sd = 0.11,
  grp2n = 60,
  es.type = "d")

# Autonomy support (IP > TD) (with SM > without SM) (n.s.)
esc_mean_sd(
  grp1m = .53,
  grp1sd = .25,
  grp1n = 15,
  grp2m = .52,
  grp2sd = .23,
  grp2n = 60,
  es.type = "d")

# Conflict (TD > IP) (without SM > with SM) (n.s.)
esc_mean_sd(
  grp1m = .27,
  grp1sd = .28,
  grp1n = 15,
  grp2m = .31,
  grp2sd = .27,
  grp2n = 60,
  es.type = "d")

```

Transformation r to d [2]

```

r_to_d <- function(r = NULL) { ((2*r) / sqrt(1 - (r)^2)) |> round(2) |> abs() }

# Closeness (TD > IP) (without SM > with SM) (**p < .01)
r_to_d(-0.41)

# Conflict (IP > TD) (with SM > without SM) (n.s.)
r_to_d(0.12)

```

1.2.6 Murray & Zvoch (2011)

<https://doi.org/10.1177/1063426609353607>

```

## Child ratings

# Communication (TD > EP) (Nonclinical > Clinical) (n.s.)
esc_mean_sd(
  grp1m = 20.53,
  grp1sd = 5.89,
  grp1n = 64,
  grp2m = 21.12,
  grp2sd = 6.58,
  grp2n = 129,
  es.type = "d")

# Trust (TD > EP) (Nonclinical > Clinical) (* p < .05)
# Univariate ANOVAs on each of the three measures comprising the multivariate composite

```

revealed a statistically significant mean difference between clinical groups on relationship trust

```
esc_mean_sd(
  grp1m = 14.11,
  grp1sd = 3.70,
  grp1n = 64,
  grp2m = 15.70,
  grp2sd = 3.93,
  grp2n = 129,
  es.type = "d")

# Alienation (EP > TD) (Clinical > Nonclinical) (n.s.)
esc_mean_sd(
  grp1m = 11.78,
  grp1sd = 3.24,
  grp1n = 64,
  grp2m = 10.88,
  grp2sd = 2.95,
  grp2n = 129,
  es.type = "d")

## Teacher ratings

# All of the Bonferroni-corrected univariate tests for both grouping variables [male vs.
female; nonclinical vs. clinical] were statistically significant (p < .05)

# Closeness (TD > EP) (Nonclinical > Clinical) (p < .05)
esc_mean_sd(
  grp1m = 36.49,
  grp1sd = 8.92,
  grp1n = 64,
  grp2m = 42.48,
  grp2sd = 7.61,
  grp2n = 129,
  es.type = "d")

# Conflict (EP > TD) (Clinical > Nonclinical) (p < .05)
esc_mean_sd(
  grp1m = 31.13,
  grp1sd = 7.90,
  grp1n = 64,
  grp2m = 18.30,
  grp2sd = 6.05,
  grp2n = 129,
  es.type = "d")
```

1.2.7 Rogers et al. (2015)

<http://dx.doi.org/10.1080/13632752.2014.972039>

```
## teacher reported

# Bond (TD > EP) (Non-ADHD group > ADHD group) (** p < .01.)
esc_mean_sd(
  grp1m = 4.32,
  grp1sd = .09,
  grp1n = 35,
  grp2m = 4.74,
```



```
grp2sd = .09,
grp2n = 36,
es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: -4.6667
Standard Error: 0.4579
Variance: 0.2097
Lower CI: -5.5642
Upper CI: -3.7691
Weight: 4.7684
```

```
# Collaboration (TD > EP) (Non-ADHD group > ADHD group) (** p < .01.)
esc_mean_sd(
  grp1m = 4.02,
  grp1sd = .59,
  grp1n = 35,
  grp2m = 4.63,
  grp2sd = .49,
  grp2n = 36,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: -1.1263
Standard Error: 0.2555
Variance: 0.0653
Lower CI: -1.6271
Upper CI: -0.6255
Weight: 15.3179
```

```
## student-reported
```

```
# Bond (significant interaction effect of ADHD status by gender, * p < .05)
# Boys (EP > TD) (ADHD > Non-ADHD)
esc_mean_sd(
  grp1m = 4.08,
  grp1sd = .97,
  grp1n = 35 * 0.75,
  grp2m = 4.00,
  grp2sd = .87,
  grp2n = 36 * 0.37,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: 0.0853
```

```
Standard Error: 0.3365
Variance: 0.1133
Lower CI: -0.5744
Upper CI: 0.7449
Weight: 8.8291
```

```
# Girls (TD > EP) (Non-ADHD > ADHD)
esc_mean_sd(
  grp1m = 3.98,
  grp1sd = .84,
  grp1n = 35 * 0.25,
  grp2m = 4.69,
  grp2sd = .41,
  grp2n = 36 * 0.63,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: -1.2759
Standard Error: 0.4293
Variance: 0.1843
Lower CI: -2.1173
Upper CI: -0.4346
Weight: 5.4266
```

```
# Collaboration (significant interaction effect of ADHD status by gender, ** p < .01)
# Boys (TD > EP) (Non-ADHD > ADHD)
esc_mean_sd(
  grp1m = 3.92,
  grp1sd = .56,
  grp1n = 35 * 0.75,
  grp2m = 4.07,
  grp2sd = .54,
  grp2n = 36 * 0.37,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: -0.2710
Standard Error: 0.3378
Variance: 0.1141
Lower CI: -0.9330
Upper CI: 0.3911
Weight: 8.7644
```

```
# Girls (TD > EP) (Non-ADHD > ADHD)
esc_mean_sd(
  grp1m = 3.59,
  grp1sd = .71,
  grp1n = 35 * 0.25,
```

```
grp2m = 4.39,
grp2sd = .39,
grp2n = 36 * 0.63,
es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: -1.6169
Standard Error: 0.4472
Variance: 0.2000
Lower CI: -2.4934
Upper CI: -0.7405
Weight: 5.0008
```

1.2.8 Vervoort et al. (2015)

<https://doi.org/10.1080/17405629.2014.989984>

```
# CARTS closeness (TD > SEBD) (General education > Special education) (statistical
significance not reported)
esc_mean_sd(
  grp1m = 3.96,
  grp1sd = 1.05,
  grp1n = 82,
  grp2m = 4.19,
  grp2sd = 0.83,
  grp2n = 145,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: -0.2513
Standard Error: 0.1387
Variance: 0.0192
Lower CI: -0.5231
Upper CI: 0.0205
Weight: 52.0000
```

```
# CARTS conflict (SEBD > TD) (Special education > General education) (statistical significance
not reported)
esc_mean_sd(
  grp1m = 2.69,
  grp1sd = 1.07,
  grp1n = 82,
  grp2m = 1.72,
  grp2sd = 0.72,
  grp2n = 145,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```

Conversion: mean and sd to effect size d
Effect Size: 1.1246
Standard Error: 0.1479
Variance: 0.0219
Lower CI: 0.8347
Upper CI: 1.4145
Weight: 45.7091

```

```

# CARTS dependency (TD > SEBD) (General education > Special education) (statistical
significance not reported)
esc_mean_sd(
  grp1m = 3.59,
  grp1sd = 1.03,
  grp1n = 82,
  grp2m = 3.12,
  grp2sd = 0.97,
  grp2n = 145,
  es.type = "d")

```

Effect Size Calculation for Meta Analysis

```

Conversion: mean and sd to effect size d
Effect Size: 0.4738
Standard Error: 0.1400
Variance: 0.0196
Lower CI: 0.1995
Upper CI: 0.7481
Weight: 51.0566

```

1.2.9 Zweers et al. (2021)

<https://doi.org/10.1177/0165025420915527>

```

# Student-teacher conflict (SEBD in SE > TD; SEBD in RE > TD) (SEBD in SE > TD: non overlapping
Bayesian 95% CI)

```

```

# M (SEBD in SE)
(2.373 + 2.818) / 2 # Bayesian 95% CI [2.373; 2.818]

```

```
[1] 2.5955
```

```

# M (SEBD in RE)
(1.544 + 2.482) / 2 # Bayesian 95% CI [1.544, 2.482]

```

```
[1] 2.013
```

```

# M (TD)
(1.464 + 1.640) / 2 # Bayesian 95% CI [1.464, 1.640]

```

```
[1] 1.552
```

1.3 Table 3: Mean differences between dyadic TSR-quality as perceived by students with EBPs and their teachers

1.3.1 Knowles et al. (2020)

<https://doi.org/10.1177/0734282919874268>

```
# Bond (SP > TP) (student > teacher) (significance not reported)
esc_mean_sd(
  grp1m = 4.34,
  grp1sd = 0.79,
  grp1n = 182,
  grp2m = 4.11,
  grp2sd = 0.61,
  grp2n = 76,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: 0.3101
Standard Error: 0.1373
Variance: 0.0188
Lower CI: 0.0410
Upper CI: 0.5791
Weight: 53.0822
```

```
# Task/goal (SP > TP) (student > teacher) (significance not reported)
esc_mean_sd(
  grp1m = 3.91,
  grp1sd = 0.74,
  grp1n = 182,
  grp2m = 3.51,
  grp2sd = 0.63,
  grp2n = 76,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: 0.5637
Standard Error: 0.1388
Variance: 0.0193
Lower CI: 0.2917
Upper CI: 0.8358
Weight: 51.8987
```

1.3.2 Van Loan & Garwood (2020)

<https://doi.org/10.1177/1534508418786779>

```
# conflict in the relationship (SP > TP) (student > teacher) (p ** < .01 | independent
sample t test)
esc_mean_sd(
```

```

grp1m = 2.53,
grp1sd = 0.83,
grp1n = 92,
grp2m = 2.95,
grp2sd = 0.97,
grp2n = 92,
es.type = "d")

```

Effect Size Calculation for Meta Analysis

```

Conversion: mean and sd to effect size d
Effect Size: -0.4653
Standard Error: 0.1494
Variance: 0.0223
Lower CI: -0.7581
Upper CI: -0.1724
Weight: 44.7881

```

```

# closeness in the relationship (SP > TP) (student > teacher) (not significant | independent
sample t test)
esc_mean_sd(
  grp1m = 3.17,
  grp1sd = 0.59,
  grp1n = 92,
  grp2m = 3.37,
  grp2sd = 0.97,
  grp2n = 92,
  es.type = "d")

```

Effect Size Calculation for Meta Analysis

```

Conversion: mean and sd to effect size d
Effect Size: -0.2491
Standard Error: 0.1480
Variance: 0.0219
Lower CI: -0.5392
Upper CI: 0.0410
Weight: 45.6459

```

1.3.3 Vervoort et al. (2015)

<https://doi.org/10.1080/17405629.2014.989984>

```

# CARTS closeness (SP > TP) (student > teacher) (significance not reported)
esc_mean_sd(
  grp1m = 3.96,
  grp1sd = 1.05,
  grp1n = 82,
  grp2m = 3.65,
  grp2sd = 0.65,
  grp2n = 82,
  es.type = "d")

```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: 0.3550
Standard Error: 0.1574
Variance: 0.0248
Lower CI: 0.0465
Upper CI: 0.6635
Weight: 40.3641
```

```
# CARTS conflict (SP > TP) (student > teacher) (significance not reported)
esc_mean_sd(
  grp1m = 2.69,
  grp1sd = 1.07,
  grp1n = 82,
  grp2m = 2.29,
  grp2sd = 0.83,
  grp2n = 82,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: 0.4177
Standard Error: 0.1579
Variance: 0.0249
Lower CI: 0.1083
Upper CI: 0.7271
Weight: 40.1248
```

```
# STRS dependency (SP > TP) (student > teacher) (significance not reported)
esc_mean_sd(
  grp1m = 3.59,
  grp1sd = 1.03,
  grp1n = 82,
  grp2m = 2.60,
  grp2sd = 0.78,
  grp2n = 82,
  es.type = "d")
```

Effect Size Calculation for Meta Analysis

```
Conversion: mean and sd to effect size d
Effect Size: 1.0836
Standard Error: 0.1672
Variance: 0.0280
Lower CI: 0.7558
Upper CI: 1.4114
Weight: 35.7522
```

Bibliography

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