**Online supplementary material**

Appendix A

Studies included in the meta-analysis

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**Table 1**. The coded variables.

|  |
| --- |
| Study identification data (study identifier, author[s]) |
| Publication year and country |
| Developer or validator status of the author(s) |
| Sample characteristics (sample size, mean age of participants, proportion of females, income, educational status, marital status, occupational status, clinical status) |
| Irrational beliefs measure and type |
| Distress measure and type |
| Irrational beliefs characteristics (general vs. specific, measured vs. manipulated, irrational beliefs reported score: total or subscale) |
| Distress characteristics (self-report vs. observer report) |
| Stressful events (present vs. absent, real/naturalistic vs. experimentally induced, personally relevant vs. not personally relevant) |
| Test statistic |
| Effect size |

**Table 2**. Direct contrast of irrational belief measures.

|  |
| --- |
| Depression *Qb (df) k r* 95% CI |
| *IBT vs. other infrequently used measures* **6.56 (1)\***IBT 10 .46\*\* [.34, .57]Other infrequently used measures 13 .25\*\* [.13, 36]*IBT vs. all other measures*  **5.43 (1)\***IBT 10 .47\*\* [.34, .58]All othermeasures37 .29\*\*[.22, .36] |
| *IBS vs. other infrequently used* 2.61 (1)IBS 7 .41\*\* [.25, .55]Other infrequently used measures 13 .25\*\* [.13, .36]*IBS vs. all other measures* .89 (1)*IBS* 7 .41\*\* [.23, .56]All othermeasures 40 .32\*\* [.25, .39] *ABS vs. other infrequently used*  3.01 (1)ABS 6 .45\*\* [.26, .61] Other infrequently used measures 13 .25\*\* [.11, .38]*ABS vs. all other measures* 2.31 (1) *ABS* 6 .45\*\* [.28, .60]All othermeasures 41 .31\*\* [.24, .38]  *SPB vs. other infrequently used measures*  .88SPB 11 .17\* [.04, .29]Other infrequently used measures 13 .25\*\* [.14, .35]*SPB vs. all other measures*  **6.7 (1)\***SPB 11 .17\* [.03, .31]All other measures 36 .37\*\* [.30, .44]   |

 Anxiety *Qb (df) k r* 95% CI

|  |
| --- |
|  |

*IBT vs. other infrequently used*  .2.96 (1)

IBT 12 .50\*\* [.33, .64]

Other infrequently used measures 13 .29\* [.1, .46]

*IBT vs. all other measures* 1.3 (1)

*IBT* 12 .50\*\* [.31, .65]

All othermeasures 32 .38\*\* [.25, .49]

*IBS vs. other infrequently used* 1.62 (1)

IBS 7 .45\*\* [.24, .62]

Other infrequently used measures 13 .29\*\* [.12, .44]

*IBS vs. all other measures* .15 (1)

*IBS* 7 .45\*\* [.20, .65]

All othermeasures 37 .40\*\* [.29. .50]

*ABS vs. other infrequently used measures*  **6.59 (1)\***

ABS 3 .73\* [.46, .87]

Other infrequently used measures 13 .29\* [.08, .47]

*ABS vs. all other measures*  **7.97 (1)\***

ABS 3 .73\*\* [.52, .86]

All other measures 41 .38\*\* [.29, .46]

*SPB vs. other infrequently used* .007 (1)

SPB 9 .28\* [.07, .47]

Other infrequently used measures 13 .29\*\* [.12, .44]

*SPB vs. all other measures* 1.73 (1)

*SPB* 9 .28\* [.03, .49]

All othermeasures 35 .44\*\* [.33, .54]

|  |
| --- |
| Notes.Other infrequently used measures = All other measures except IBS, ABS, and SPB; All other measures = IBS, ABS, SPB, and infrequently used measures together*. k* is the number of effect sizes included in each analysis. CI = confidence interval.*\* p* < .05, \*\* *p* < .001 |

## Identification

Additional records identified through other sources (n = 21)

Records identified through database searching (n = 161)

## Screening

Records after duplicates removed (n = 14)

Records excluded (n = 79)

Records screened (n = 168)

Full-text articles excluded, with reasons (n = 6)

Irrational beliefs or distress not measured (3)

Irrational beliefs not measured according to REBT theory (2)

No reported association between irrational beliefs and distress (1)

## Eligibility

Full-text articles assessed for eligibility (n = 89)

## Included

Articles included in the

Meta-analysis (n = 83)

**Figure 1**. Flow diagram of the study selection process.



**Figure 2***.* Funnel plot of publication bias. Funnel plot for the effect sizes of the relation between irrational beliefs and psychological distress. The vertical bar represents the weighted mean effect size. The black dots represent the studies included in the analyses. The white dot represents the study that would be needed for attaining complete symmetry.