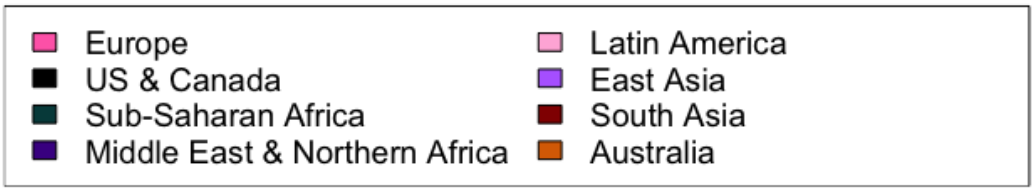
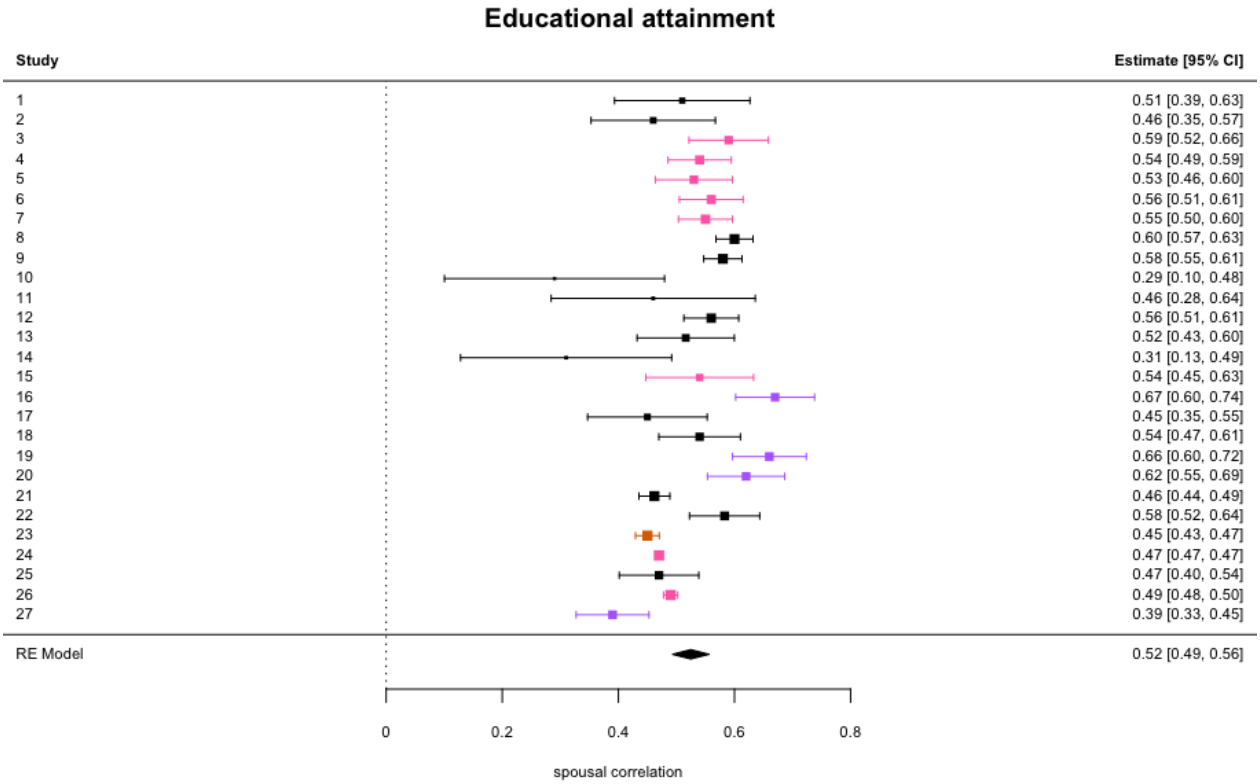
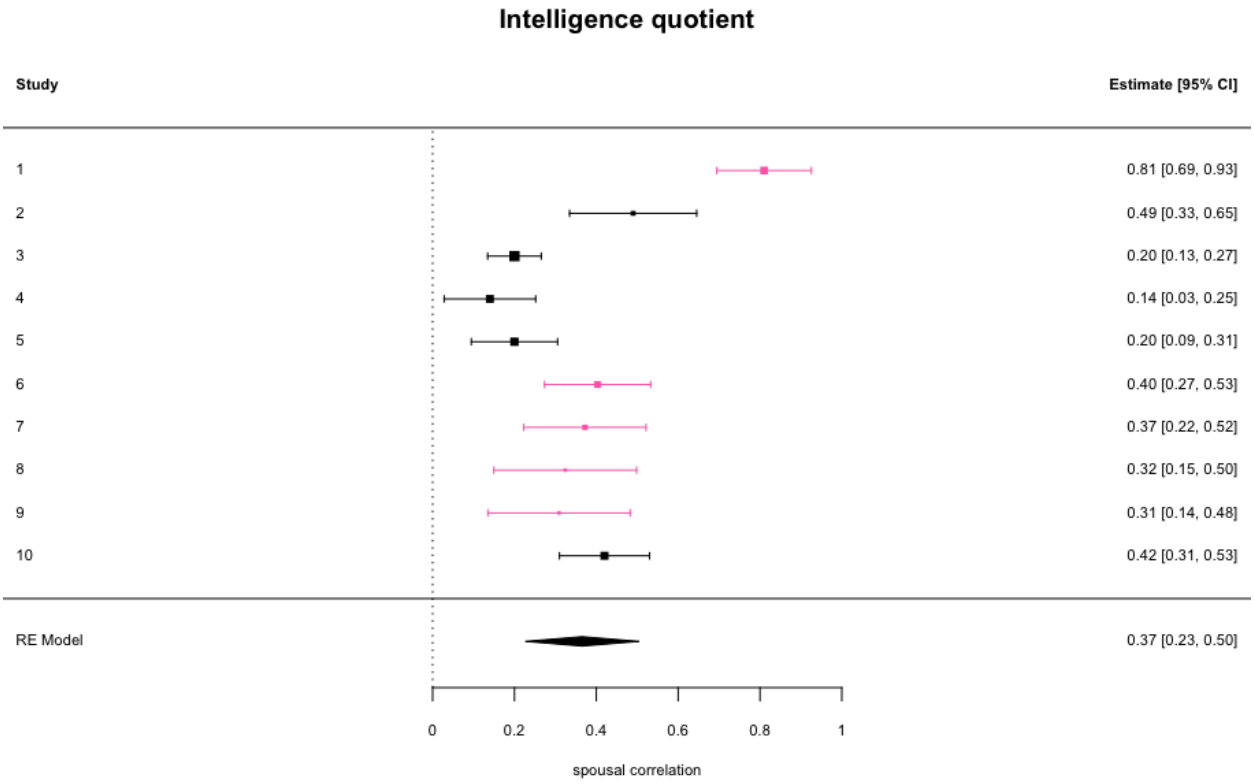
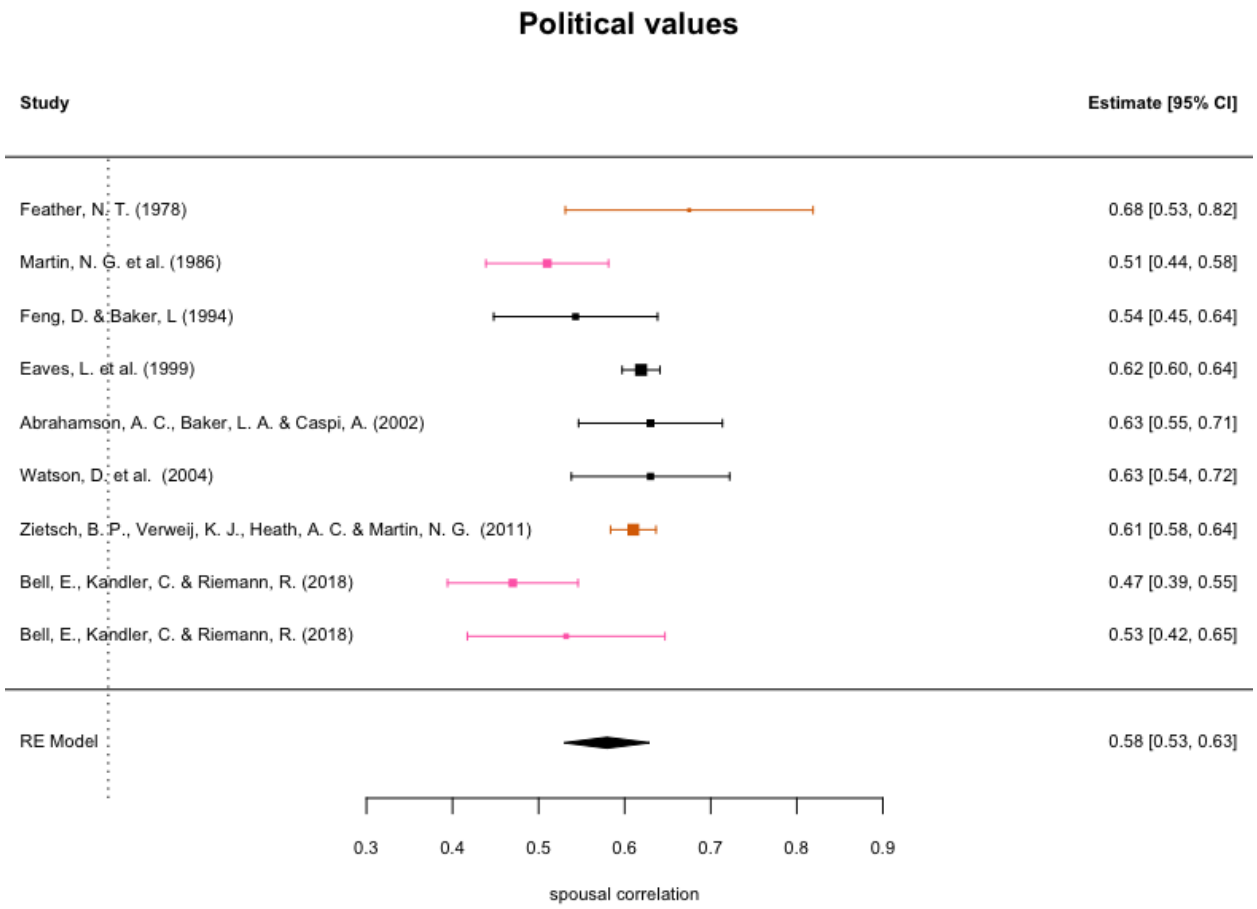
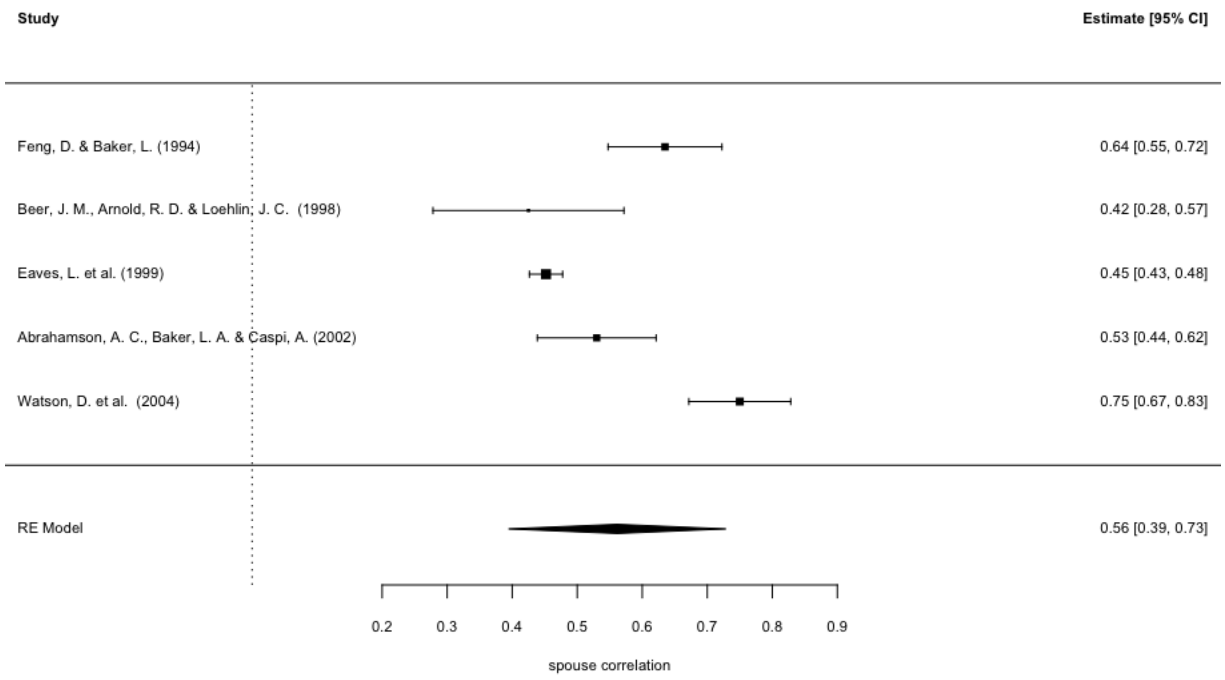

Europe
US & Canada
Sub-Saharan Africa
Middle East & Northern Africa
Latin America
East Asia
South Asia
Australia


Educational attainment
Study
Estimate [95% CI]
1 0.51 [0.39, 0.63]
2 0.46 [0.35, 0.57]
3 0.59 [0.52, 0.66]
4 0.54 [0.49, 0.59]
5 0.53 [0.46, 0.60]
6 0.56 [0.51, 0.61]
7 0.55 [0.50, 0.60]
8 0.60 [0.57, 0.63]
9 0.58 [0.55, 0.61]
10 0.29 [0.10, 0.48]
11 0.46 [0.28, 0.64]
12 0.56 [0.51, 0.61]
13 0.52 [0.43, 0.60]
14 0.31 [0.13, 0.49]
15 0.54 [0.45, 0.63]
16 0.67 [0.60, 0.74]
17 0.45 [0.35, 0.55]
18 0.54 [0.47, 0.61]
19 0.66 [0.60, 0.72]
20 0.62 [0.55, 0.69]
21 0.46 [0.44, 0.49]
22 0.58 [0.52, 0.64]
23 0.45 [0.43, 0.47]
24 0.47 [0.47, 0.47]
25 0.47 [0.40, 0.54]
26 0.49 [0.48, 0.50]
27 0.39 [0.33, 0.45]
RE Model
0.52 [0.49, 0.56]
0
0.2
0.4
0.6
0.8
spousal correlation

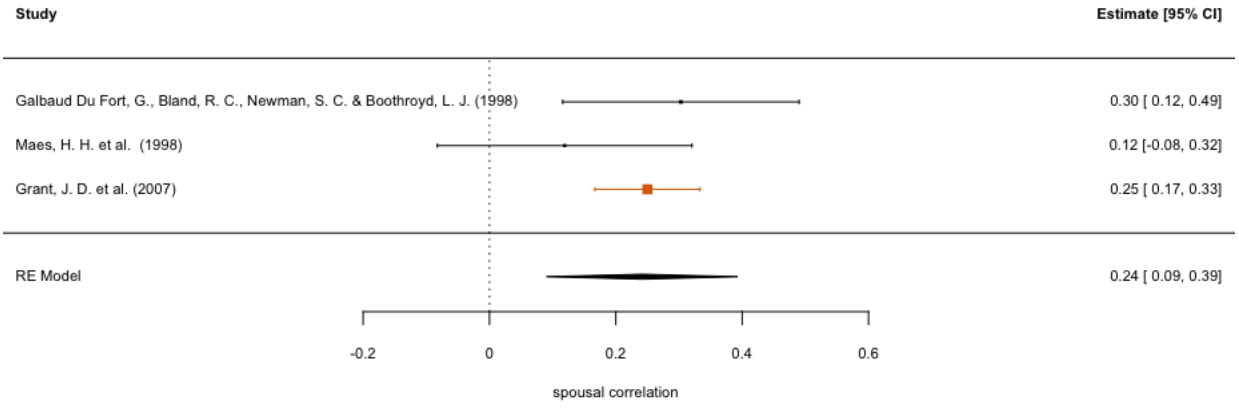

Intelligence quotient
Study
Estimate [95% CI]
1
0.81 [0.69, 0.93]
2
0.49 [0.33, 0.65]
3
0.20 [0.13, 0.27]
4
0.14 [0.03, 0.25]
5
0.20 [0.09, 0.31]
6
0.40 [0.27, 0.53]
7
0.37 [0.22, 0.52]
8
0.32 [0.15, 0.50]
9
0.31 [0.14, 0.48]
10
0.42 [0.31, 0.53]
RE Model
0.37 [0.23, 0.50]
0
0.2
0.4
0.6
0.8
1
spousal correlation


Political values
Study
Estimate [95% CI]
Feather, N. T. (1978)
0.68 [0.53, 0.82]
Martin, N. G. et al. (1986)
0.51 [0.44, 0.58]
Feng, D. & Baker, L (1994)
0.54 [0.45, 0.64]
Eaves, L. et al. (1999)
0.62 [0.60, 0.64]
Abrahamson, A. C., Baker, L. A. & Caspi, A. (2002)
0.63 [0.55, 0.71]
Watson, D. et al. (2004)
0.63 [0.54, 0.72]
Zietsch, B. P., Verweij, K. J., Heath, A. C. & Martin, N. G. (2011)
0.61 [0.58, 0.64]
Bell, E., Kandler, C. & Riemann, R. (2018)
0.47 [0.39, 0.55]
Bell, E., Kandler, C. & Riemann, R. (2018)
0.53 [0.42, 0.65]
RE Model
0.58 [0.53, 0.63]
0.3
0.4
0.5
0.6
0.7
0.8
0.9
spousal correlation

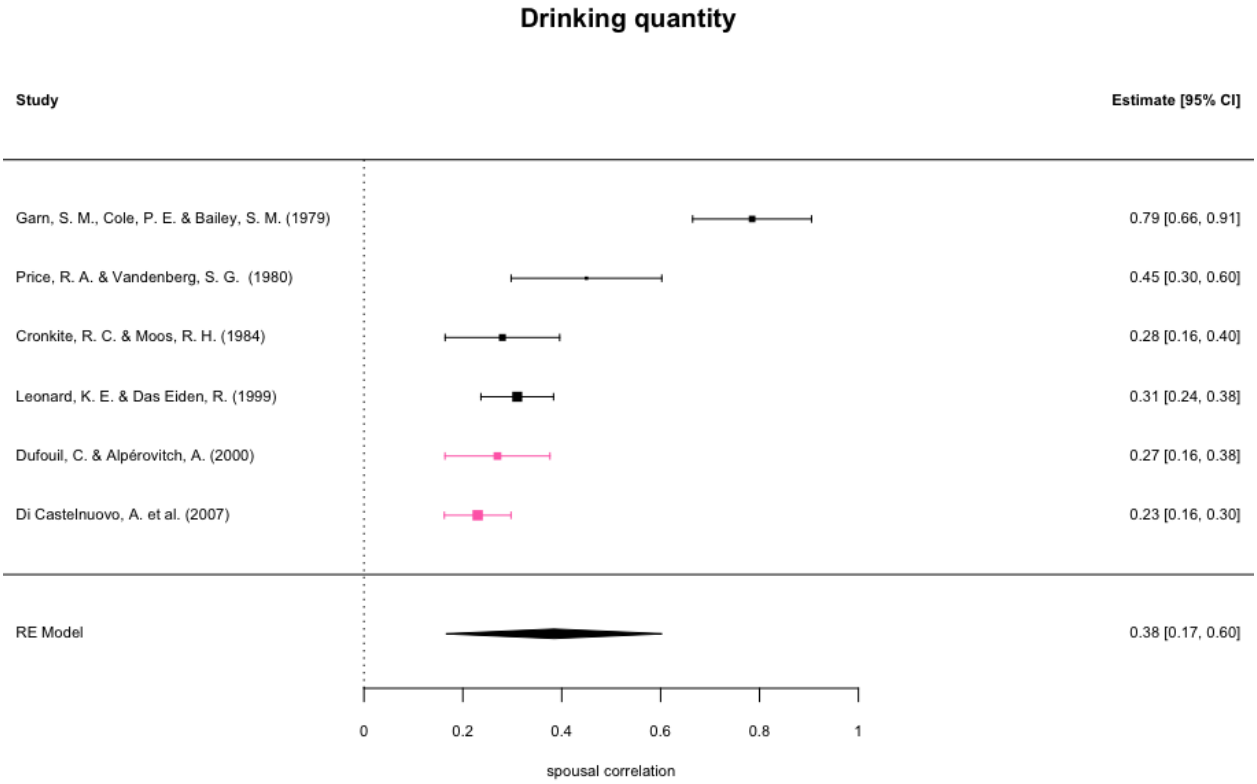
Religiosity



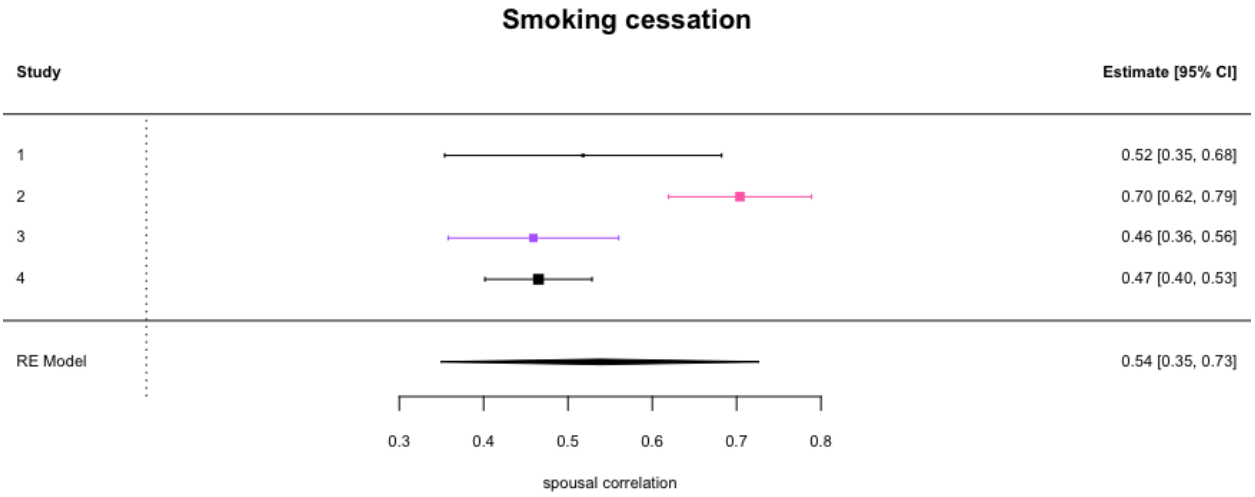
Alcohol use disorder



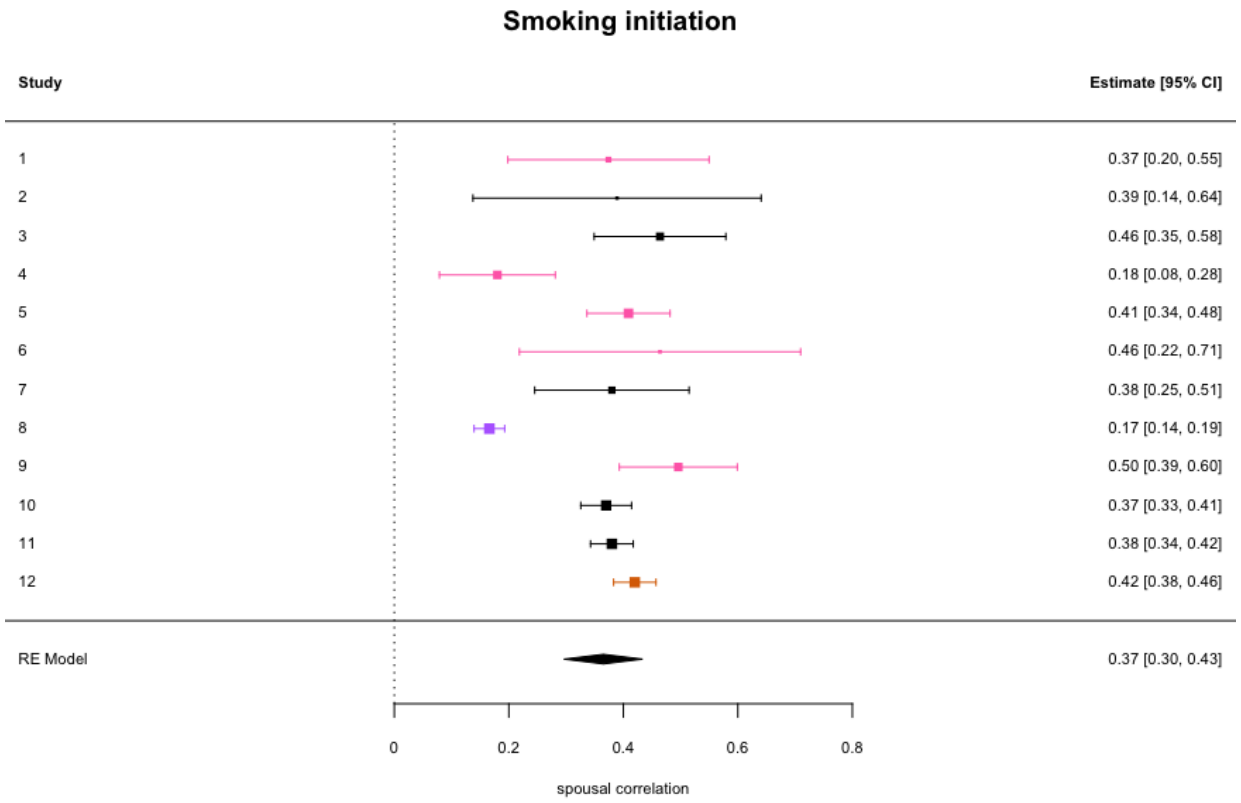
25

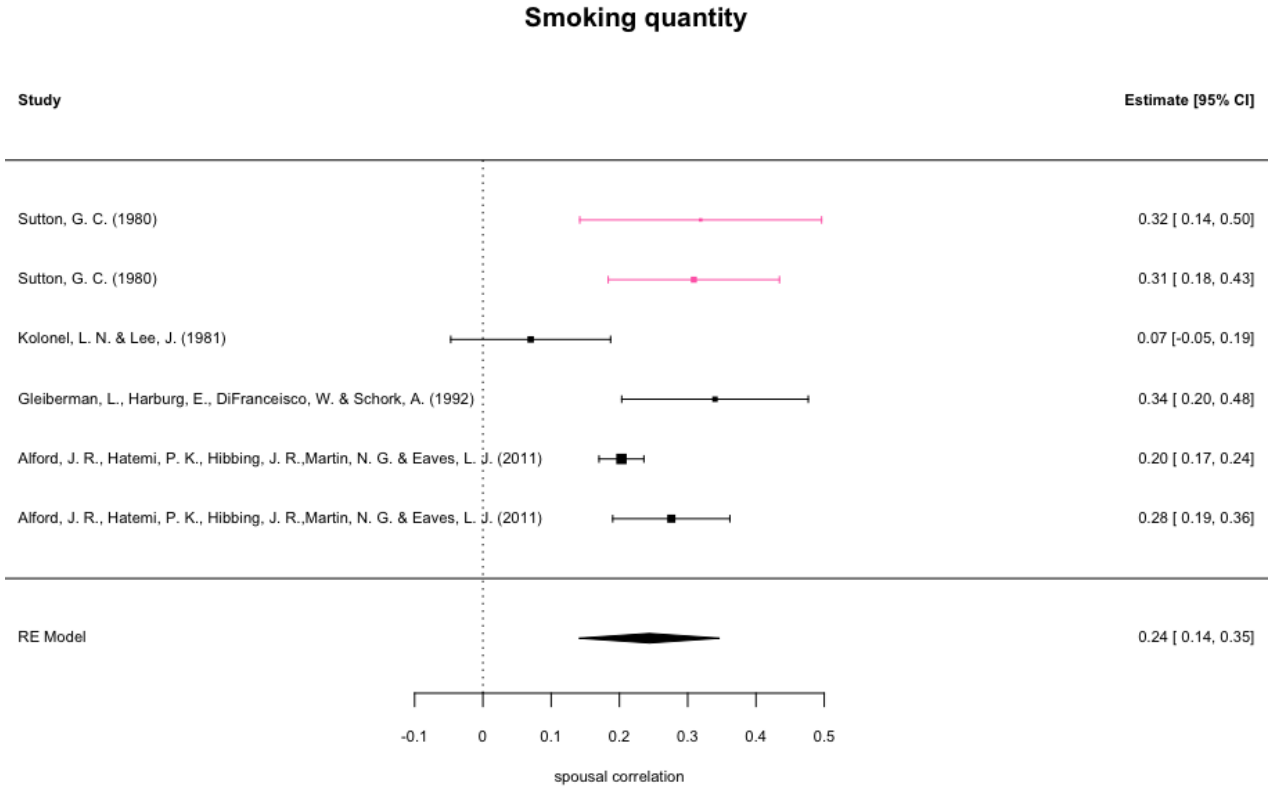

Drinking quantity
Study
Estimate [95% CI]
Garn, S. M., Cole, P. E. & Bailey, S. M. (1979)
0.79 [0.66, 0.91]
Price, R. A. & Vandenberg, S. G. (1980)
0.45 [0.30, 0.60]
Cronkite, R. C. & Moos, R. H. (1984)
0.28 [0.16, 0.40]
Leonard, K. E. & Das Eiden, R. (1999)
0.31 [0.24, 0.38]
Dufouil, C. & Alpérovitch, A. (2000)
0.27 [0.16, 0.38]
Di Castelnuovo, A. et al. (2007)
0.23 [0.16, 0.30]
RE Model
0.38 [0.17, 0.60]
0
0.2
0.4
0.6
0.8
1
spousal correlation

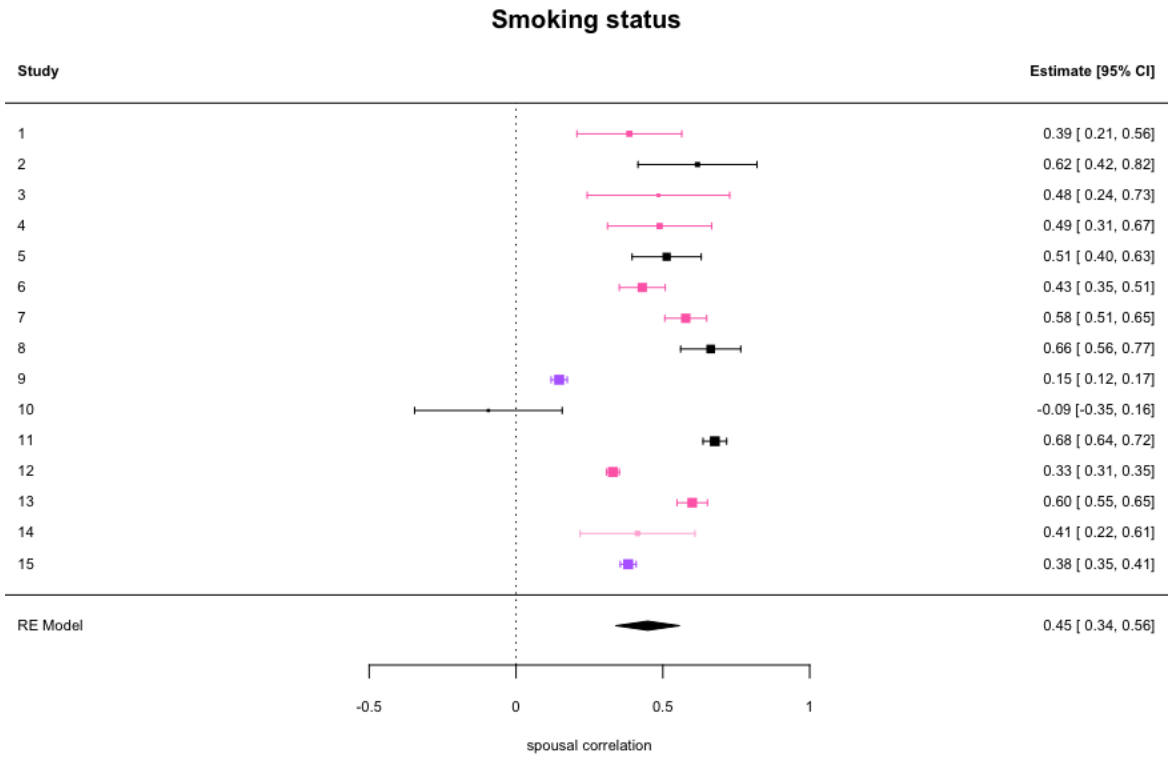
26

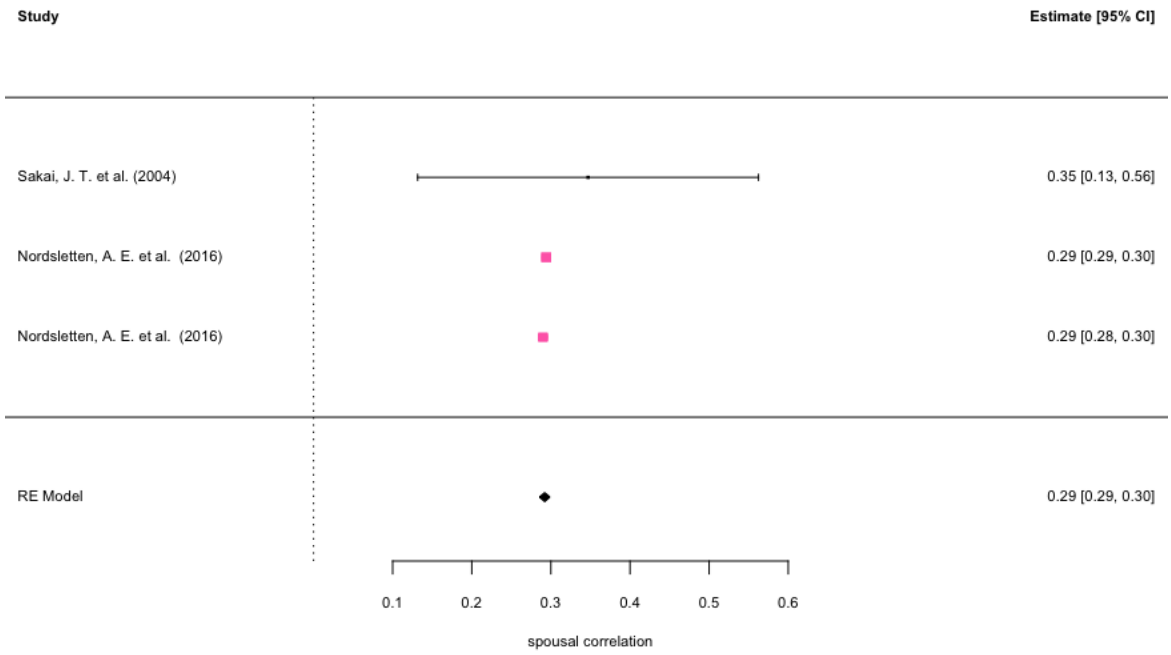

Smoking cessation
Study
Estimate [95% CI]
1
0.52 [0.35, 0.68]
2
0.70 [0.62, 0.79]
3
0.46 [0.36, 0.56]
4
0.47 [0.40, 0.53]
RE Model
0.54 [0.35, 0.73]
0.3
0.4
0.5
0.6
0.7
0.8
spousal correlation

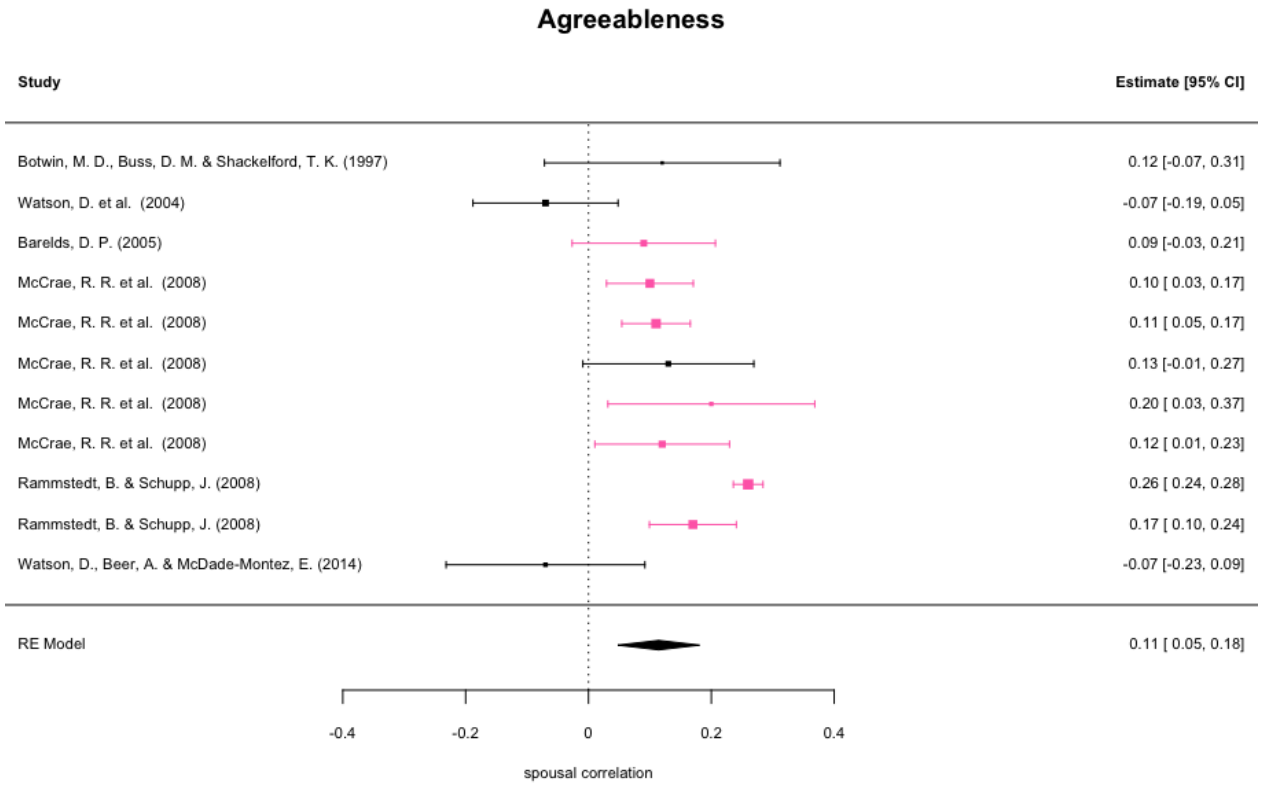
27


Smoking initiation
Study
Estimate [95% CI]
1
0.37 [0.20, 0.55]
2
0.39 [0.14, 0.64]
3
0.46 [0.35, 0.58]
4
0.18 [0.08, 0.28]
5
0.41 [0.34, 0.48]
6
0.46 [0.22, 0.71]
7
0.38 [0.25, 0.51]
8
0.17 [0.14, 0.19]
9
0.50 [0.39, 0.60]
10
0.37 [0.33, 0.41]
11
0.38 [0.34, 0.42]
12
0.42 [0.38, 0.46]
RE Model
0.37 [0.30, 0.43]
0
0.2
0.4
0.6
0.8
spousal correlation

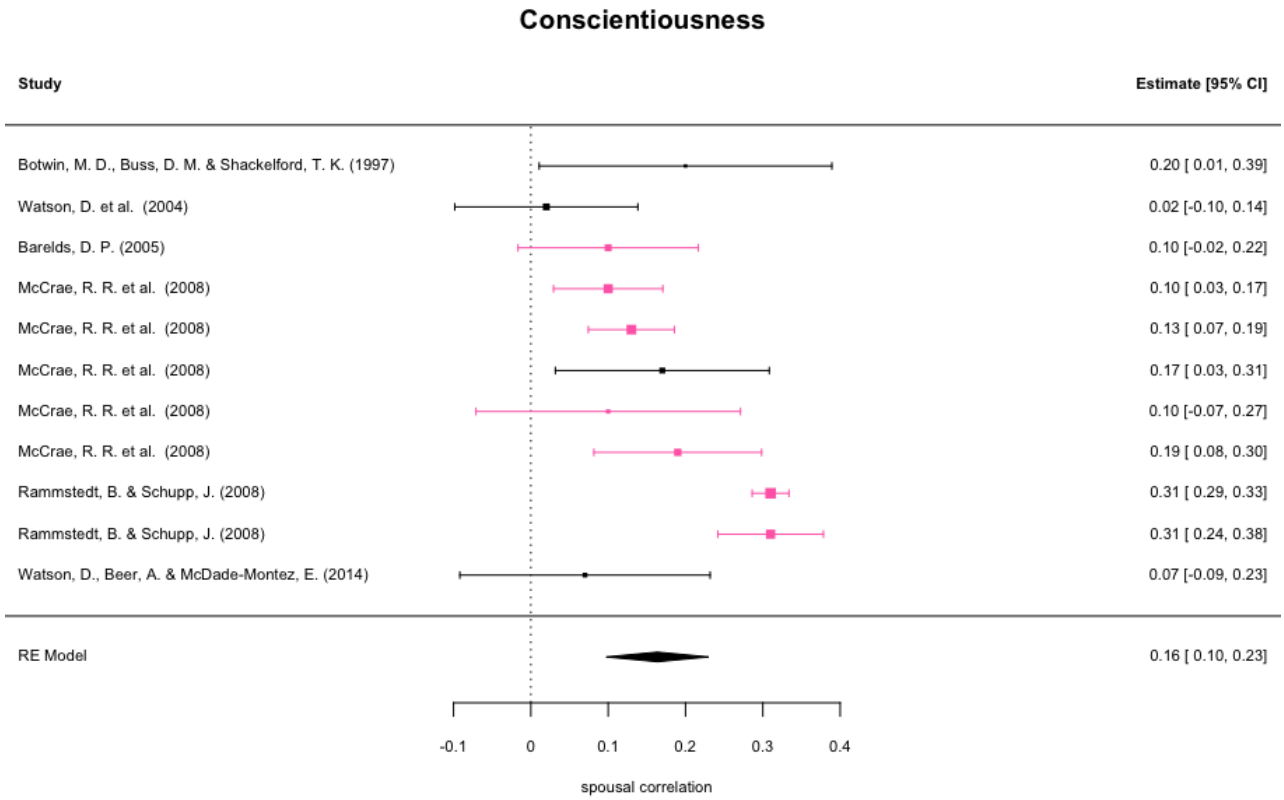

Smoking quantity
Study
Estimate [95% CI]
Sutton, G. C. (1980)
0.32 [0.14, 0.50]
Sutton, G. C. (1980)
0.31 [0.18, 0.43]
Kolonel, L. N. & Lee, J. (1981)
0.07 [-0.05, 0.19]
Gleiberman, L., Harburg, E., DiFranceisco, W. & Schork, A. (1992)
0.34 [0.20, 0.48]
Alford, J. R., Hatemi, P. K., Hibbing, J. R.,Martin, N. G. & Eaves, L. J. (2011)
0.20 [0.17, 0.24]
Alford, J. R., Hatemi, P. K., Hibbing, J. R.,Martin, N. G. & Eaves, L. J. (2011)
0.28 [0.19, 0.36]
RE Model
0.24 [0.14, 0.35]
-0.1
0
0.1
0.2
0.3
0.4
0.5
spousal correlation


Smoking status
Study
Estimate [95% CI]
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
0.39 [0.21, 0.56]
0.62 [0.42, 0.82]
0.48 [0.24, 0.73]
0.49 [0.31, 0.67]
0.51 [0.40, 0.63]
0.43 [0.35, 0.51]
0.58 [0.51, 0.65]
0.66 [0.56, 0.77]
0.15 [0.12, 0.17]
-0.09 [-0.35, 0.16]
0.68 [0.64, 0.72]
0.33 [0.31, 0.35]
0.60 [0.55, 0.65]
0.41 [0.22, 0.61]
0.38 [0.35, 0.41]
RE Model
0.45 [0.34, 0.56]
-0.5
0
0.5
1
spousal correlation


Substance use disorder
Study
Estimate [95% CI]
Sakai, J. T. et al. (2004)
Nordsletten, A. E. et al. (2016)
Nordsletten, A. E. et al. (2016)
0.35 [0.13, 0.56]
0.29 [0.29, 0.30]
0.29 [0.28, 0.30]
RE Model
0.29 [0.29, 0.30]
0.1
0.2
0.3
0.4
0.5
0.6
spousal correlation

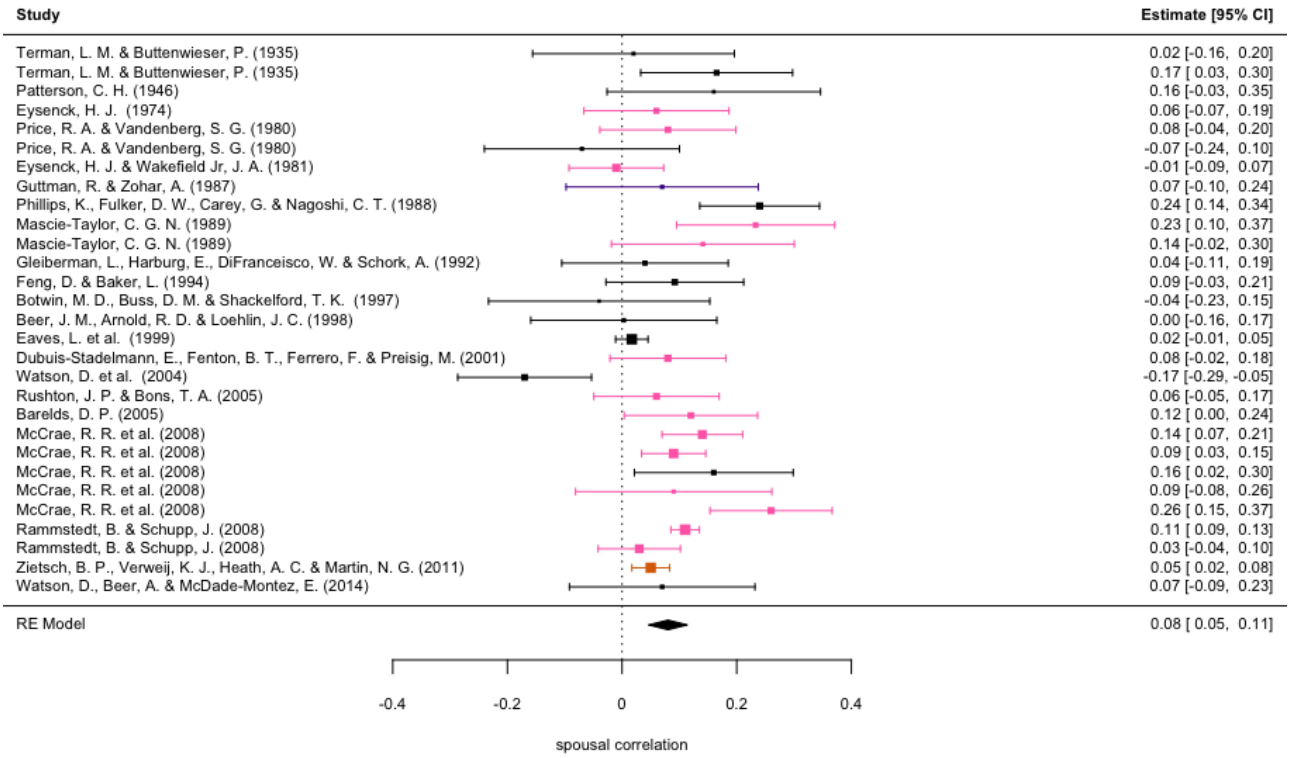

Agreeableness
Study
Estimate [95% CI]
Botwin, M. D., Buss, D. M. & Shackelford, T. K. (1997)
0.12 [-0.07, 0.31]
Watson, D. et al. (2004)
-0.07 [-0.19, 0.05]
Barelds, D. P. (2005)
0.09 [-0.03, 0.21]
McCrae, R. R. et al. (2008)
0.10 [0.03, 0.17]
McCrae, R. R. et al. (2008)
0.11 [0.05, 0.17]
McCrae, R. R. et al. (2008)
0.13 [-0.01, 0.27]
McCrae, R. R. et al. (2008)
0.20 [0.03, 0.37]
McCrae, R. R. et al. (2008)
0.12 [0.01, 0.23]
Rammstedt, B. & Schupp, J. (2008)
0.26 [0.24, 0.28]
Rammstedt, B. & Schupp, J. (2008)
0.17 [0.10, 0.24]
Watson, D., Beer, A. & McDade-Montez, E. (2014)
-0.07 [-0.23, 0.09]
RE Model
0.11 [0.05, 0.18]
-0.4
-0.2
0
0.2
0.4
spousal correlation

36


Conscientiousness
Study
Estimate [95% CI]
Botwin, M. D., Buss, D. M. & Shackelford, T. K. (1997)
0.20 [0.01, 0.39]
Watson, D. et al. (2004)
0.02 [-0.10, 0.14]
Barelds, D. P. (2005)
0.10 [-0.02, 0.22]
McCrae, R. R. et al. (2008)
0.10 [0.03, 0.17]
McCrae, R. R. et al. (2008)
0.13 [0.07, 0.19]
McCrae, R. R. et al. (2008)
0.17 [0.03, 0.31]
McCrae, R. R. et al. (2008)
0.10 [-0.07, 0.27]
McCrae, R. R. et al. (2008)
0.19 [0.08, 0.30]
Rammstedt, B. & Schupp, J. (2008)
0.31 [0.29, 0.33]
Rammstedt, B. & Schupp, J. (2008)
0.31 [0.24, 0.38]
Watson, D., Beer, A. & McDade-Montez, E. (2014)
0.07 [-0.09, 0.23]
RE Model
0.16 [0.10, 0.23]
-0.1
0
0.1
0.2
0.3
0.4
spousal correlation

37

Extraversion



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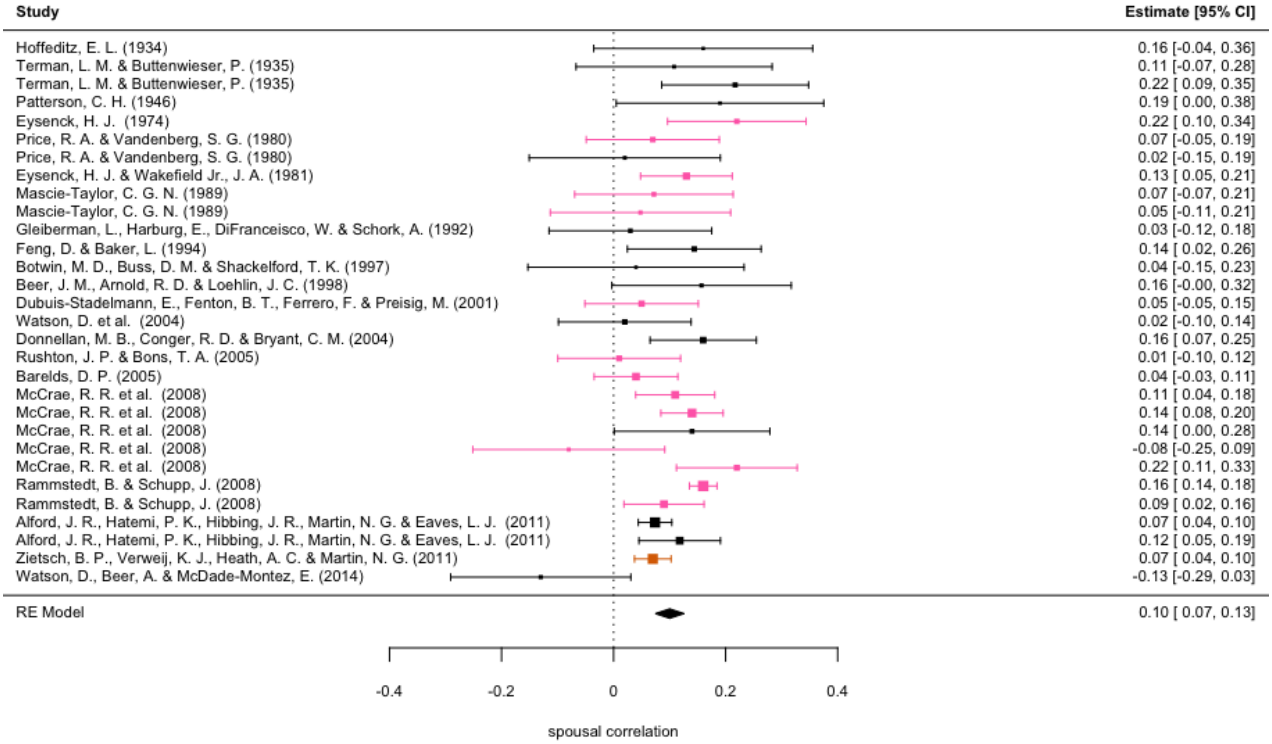
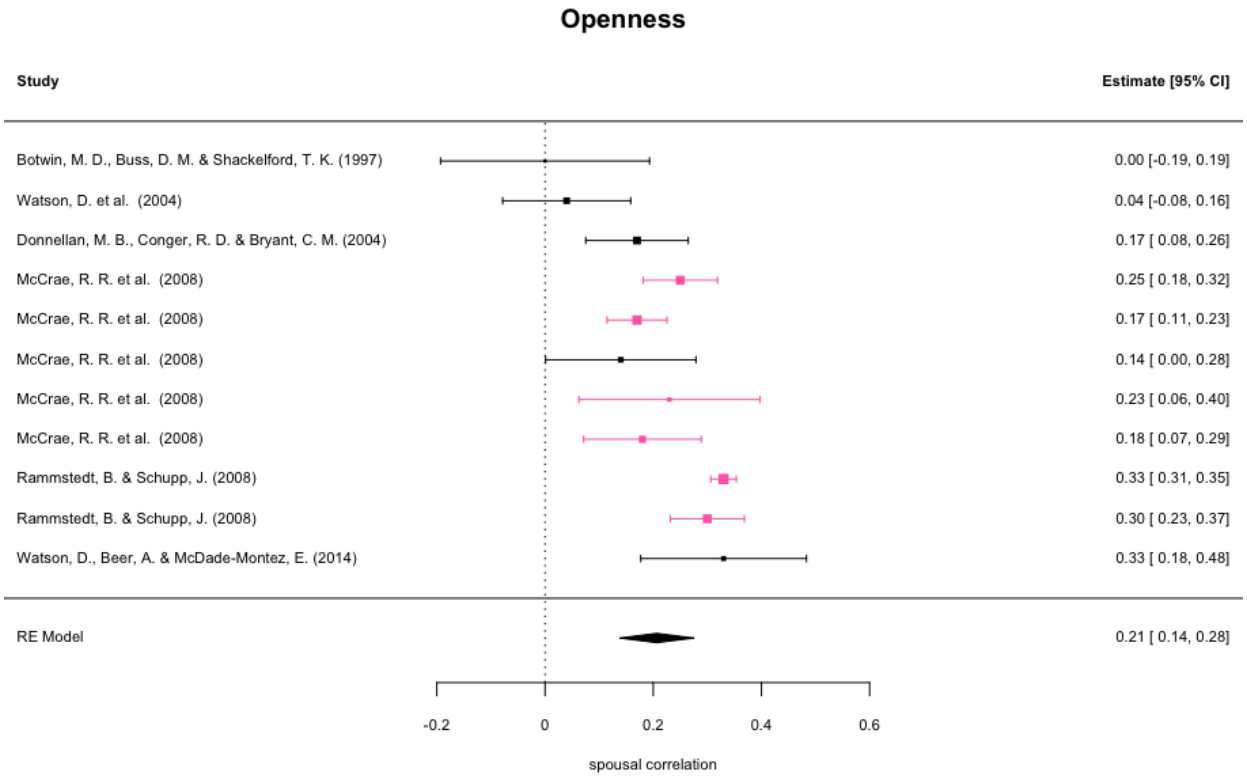
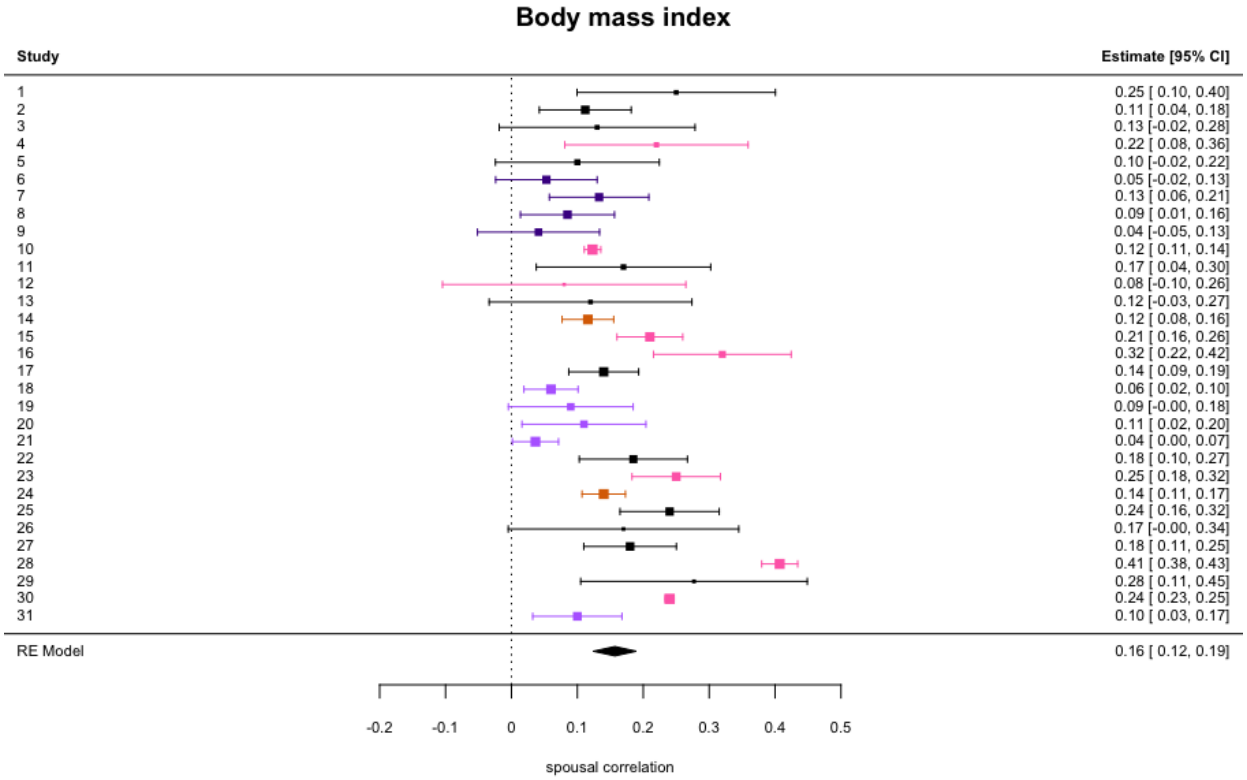
Neuroticism



39

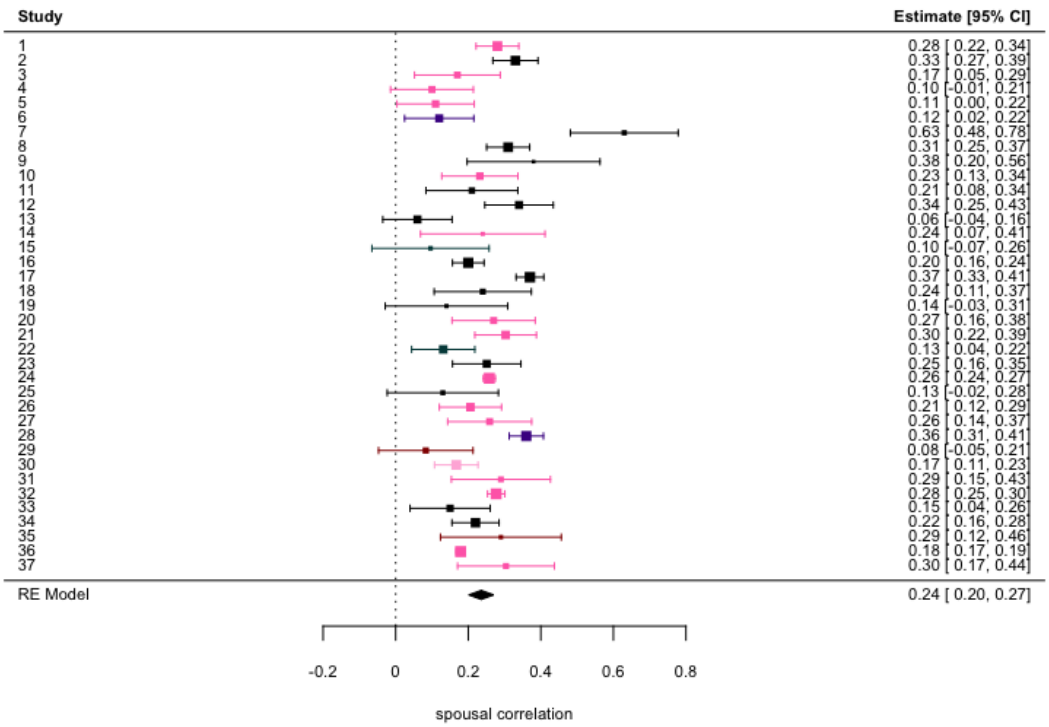

Openness
Study
Estimate [95% CI]
Botwin, M. D., Buss, D. M. & Shackelford, T. K. (1997)
0.00 [-0.19, 0.19]
Watson, D. et al. (2004)
0.04 [-0.08, 0.16]
Donnellan, M. B., Conger, R. D. & Bryant, C. M. (2004)
0.17 [0.08, 0.26]
McCrae, R. R. et al. (2008)
0.25 [0.18, 0.32]
McCrae, R. R. et al. (2008)
0.17 [0.11, 0.23]
McCrae, R. R. et al. (2008)
0.14 [0.00, 0.28]
McCrae, R. R. et al. (2008)
0.23 [0.06, 0.40]
McCrae, R. R. et al. (2008)
0.18 [0.07, 0.29]
Rammstedt, B. & Schupp, J. (2008)
0.33 [0.31, 0.35]
Rammstedt, B. & Schupp, J. (2008)
0.30 [0.23, 0.37]
Watson, D., Beer, A. & McDade-Montez, E. (2014)
0.33 [0.18, 0.48]
RE Model
0.21 [0.14, 0.28]
-0.2
0
0.2
0.4
0.6
spousal correlation

40


Body mass index
Study
Estimate [95% CI]
1
0.25 [0.10, 0.40]
2
0.11 [0.04, 0.18]
3
0.13 [-0.02, 0.28]
4
0.22 [0.08, 0.36]
5
0.10 [-0.02, 0.22]
6
0.05 [-0.02, 0.13]
7
0.13 [0.06, 0.21]
8
0.09 [0.01, 0.16]
9
0.04 [-0.05, 0.13]
10
0.12 [0.11, 0.14]
11
0.17 [0.04, 0.30]
12
0.08 [-0.10, 0.26]
13
0.12 [-0.03, 0.27]
14
0.12 [0.08, 0.16]
15
0.21 [0.16, 0.26]
16
0.32 [0.22, 0.42]
17
0.14 [0.09, 0.19]
18
0.06 [0.02, 0.10]
19
0.09 [-0.00, 0.18]
20
0.11 [0.02, 0.20]
21
0.04 [0.00, 0.07]
22
0.18 [0.10, 0.27]
23
0.25 [0.18, 0.32]
24
0.14 [0.11, 0.17]
25
0.24 [0.16, 0.32]
26
0.17 [-0.00, 0.34]
27
0.18 [0.11, 0.25]
28
0.41 [0.38, 0.43]
29
0.28 [0.11, 0.45]
30
0.24 [0.23, 0.25]
31
0.10 [0.03, 0.17]
RE Model
0.16 [0.12, 0.19]
-0.2
-0.1
0
0.1
0.2
0.3
0.4
0.5
spousal correlation

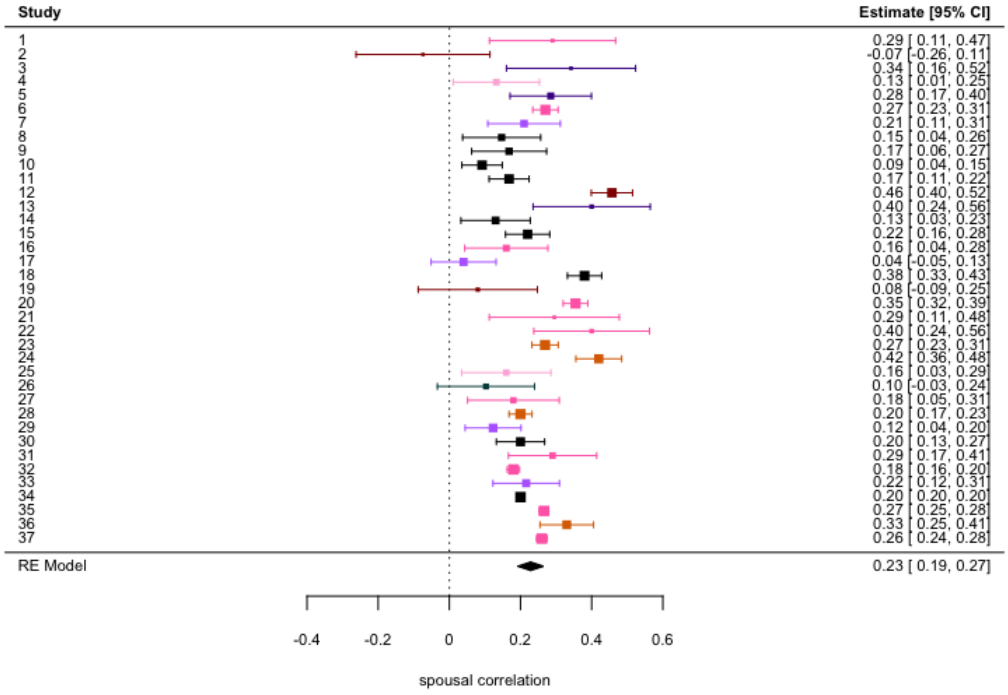
41

Height

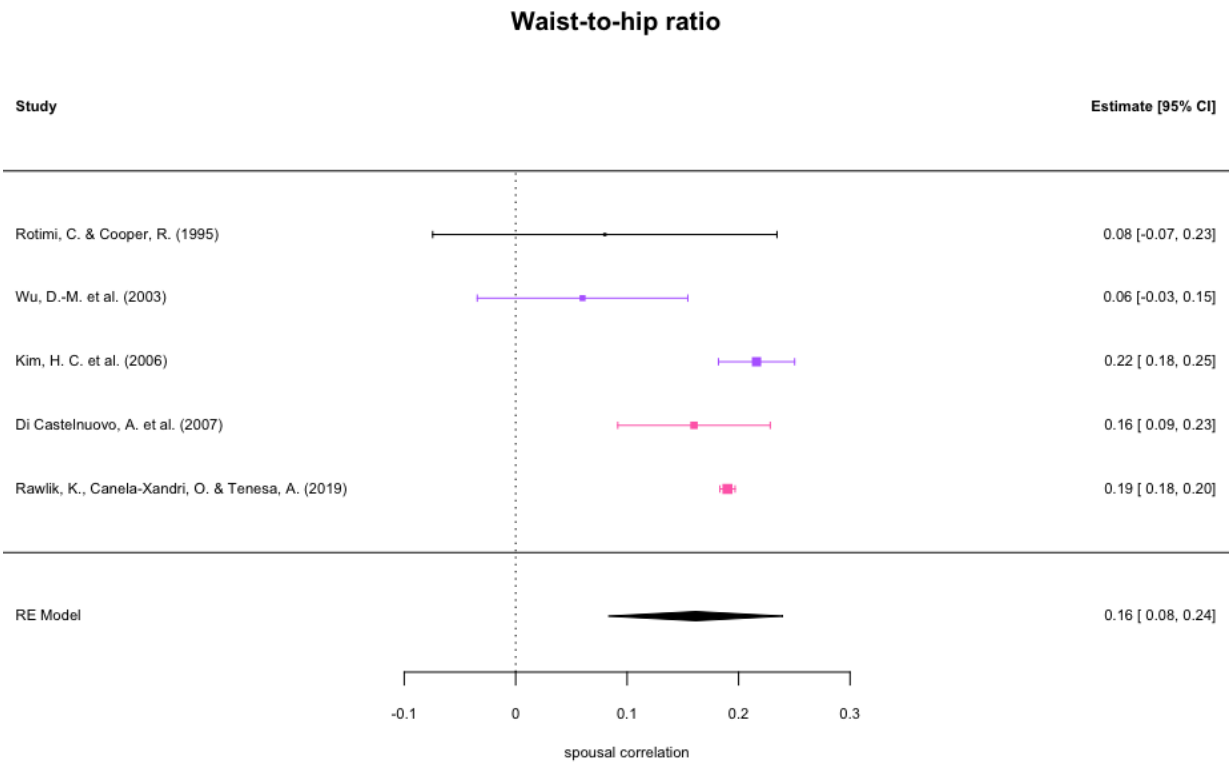


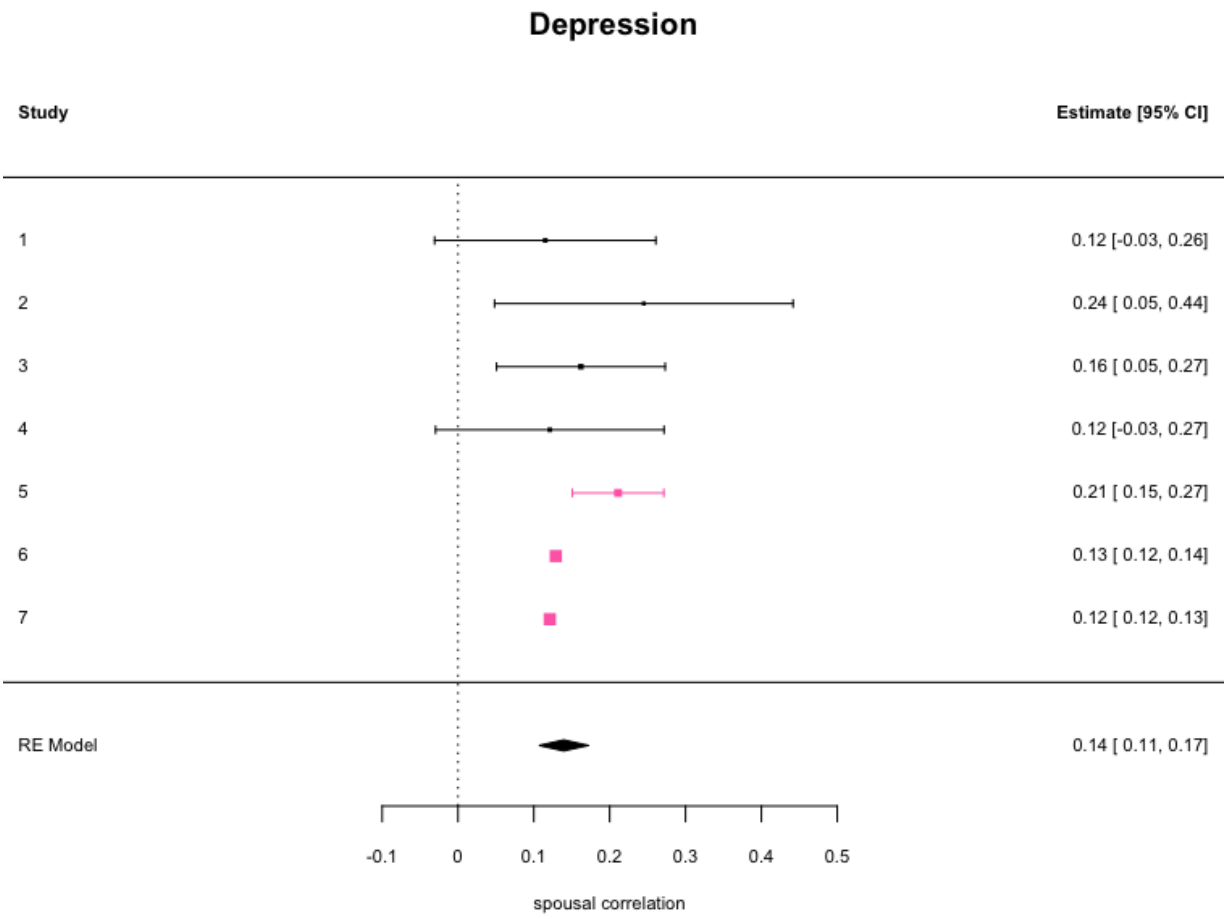
42

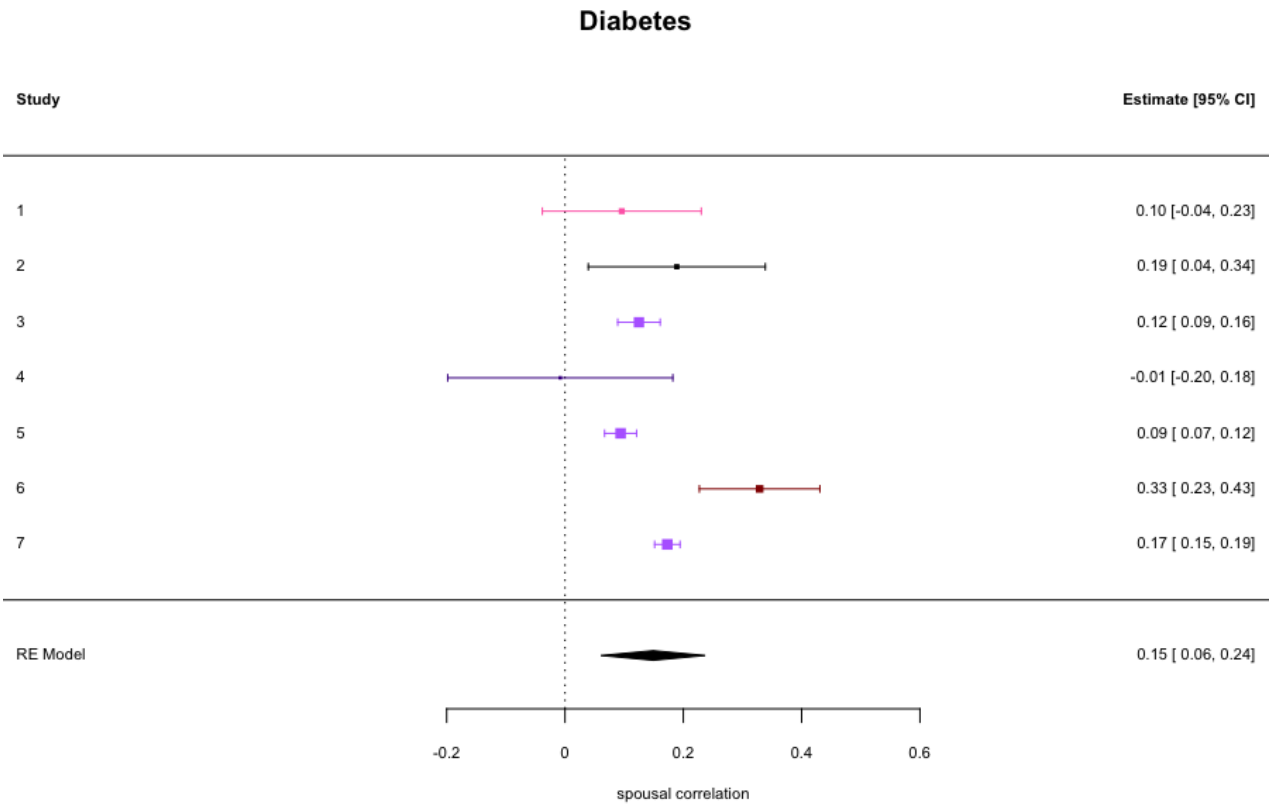
Height (continued)

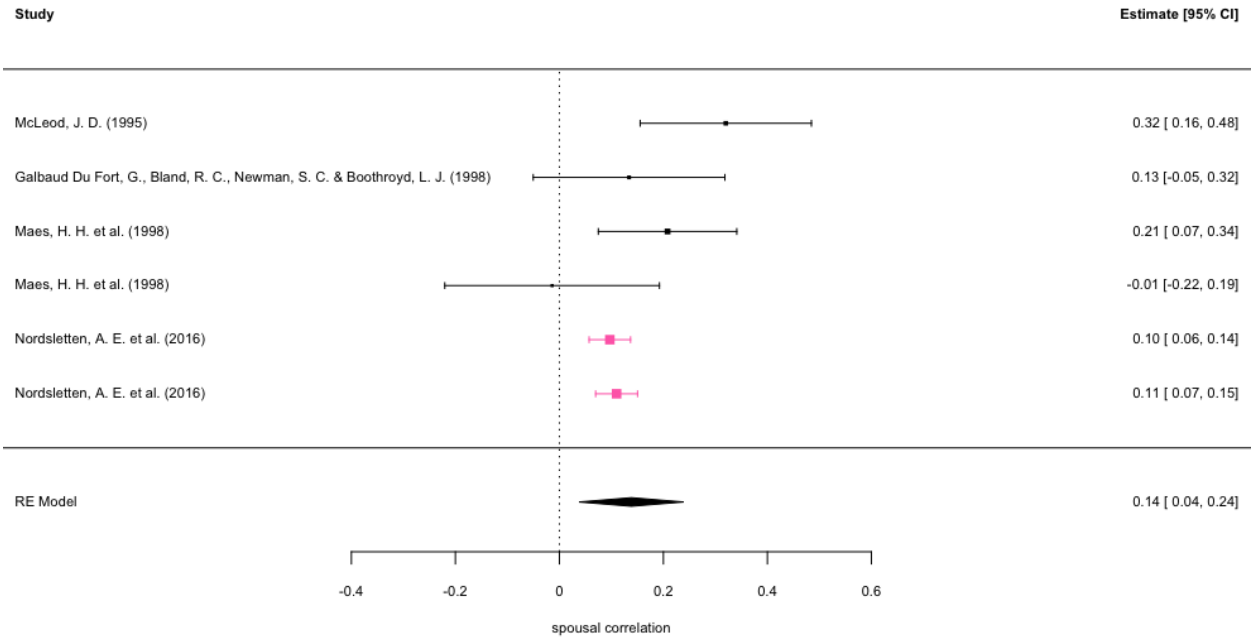


43

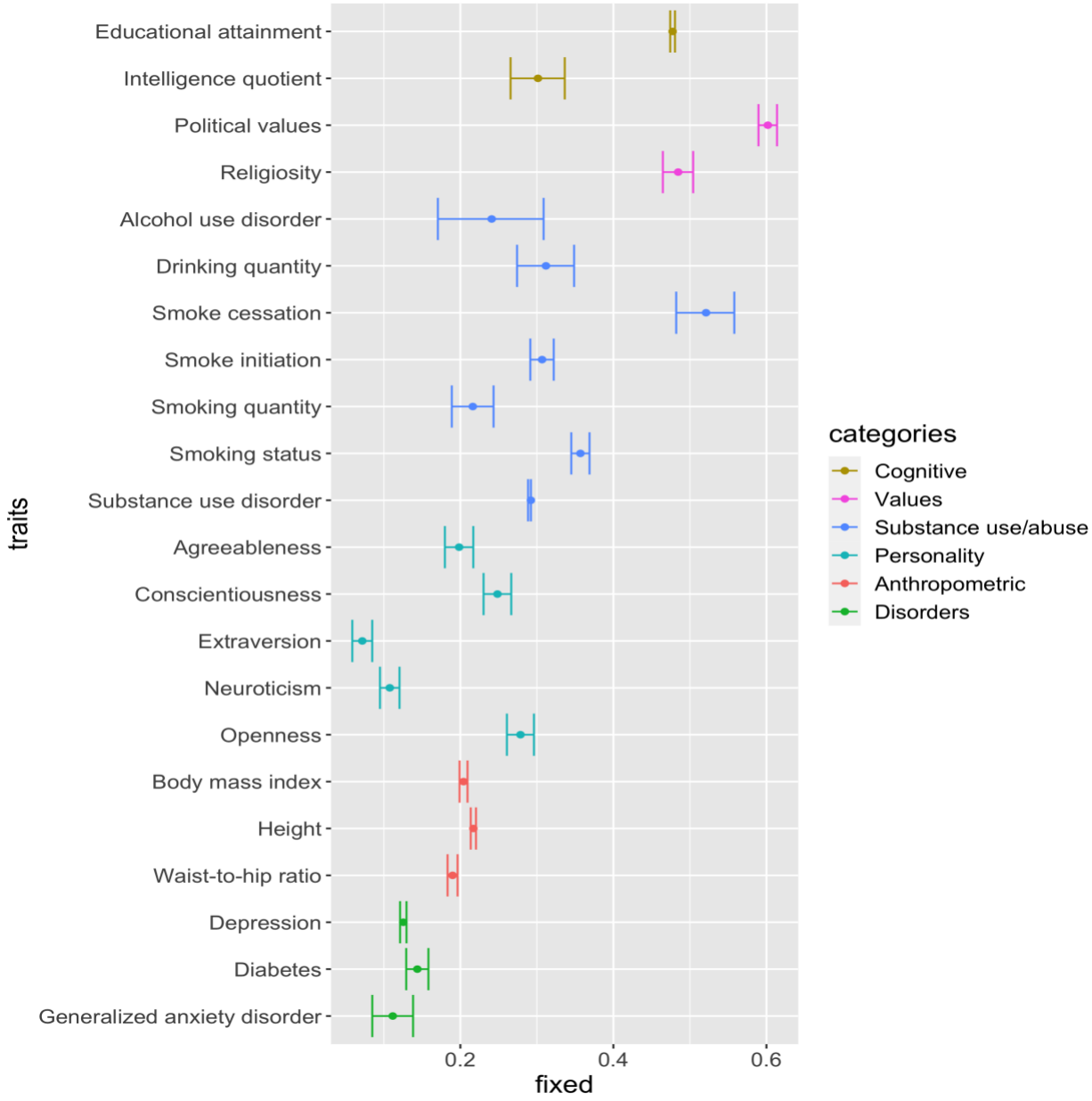

Waist-to-hip ratio
Study
Estimate [95% CI]
Rotimi, C. & Cooper, R. (1995)
0.08 [-0.07, 0.23]
Wu, D.-M. et al. (2003)
0.06 [-0.03, 0.15]
Kim, H. C. et al. (2006)
0.22 [0.18, 0.25]
Di Castelnuovo, A. et al. (2007)
0.16 [0.09, 0.23]
Rawlik, K., Canela-Xandri, O. & Tenesa, A. (2019)
0.19 [0.18, 0.20]
RE Model
0.16 [0.08, 0.24]
-0.1
0
0.1
0.2
0.3
spousal correlation


Depression
Study
Estimate [95% CI]
1
0.12 [-0.03, 0.26]
2
0.24 [0.05, 0.44]
3
0.16 [0.05, 0.27]
4
0.12 [-0.03, 0.27]
5
0.21 [0.15, 0.27]
6
0.13 [0.12, 0.14]
7
0.12 [0.12, 0.13]
RE Model
0.14 [0.11, 0.17]
-0.1
0
0.1
0.2
0.3
0.4
0.5
spousal correlation

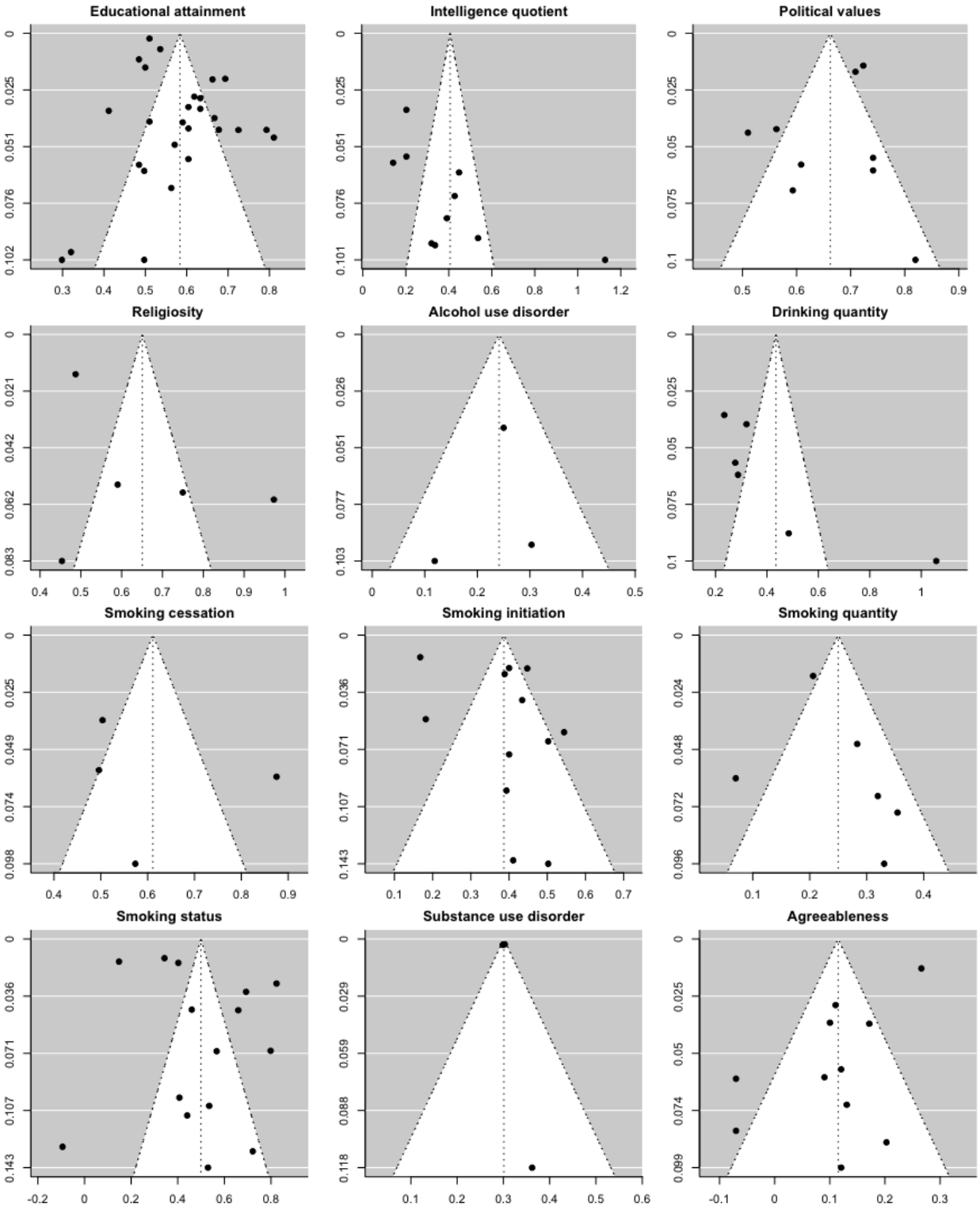

Diabetes
Study
Estimate [95% CI]
1
0.10 [-0.04, 0.23]
2
0.19 [0.04, 0.34]
3
0.12 [0.09, 0.16]
4
-0.01 [-0.20, 0.18]
5
0.09 [0.07, 0.12]
6
0.33 [0.23, 0.43]
7
0.17 [0.15, 0.19]
RE Model
0.15 [0.06, 0.24]
-0.2
0
0.2
0.4
0.6
spousal correlation

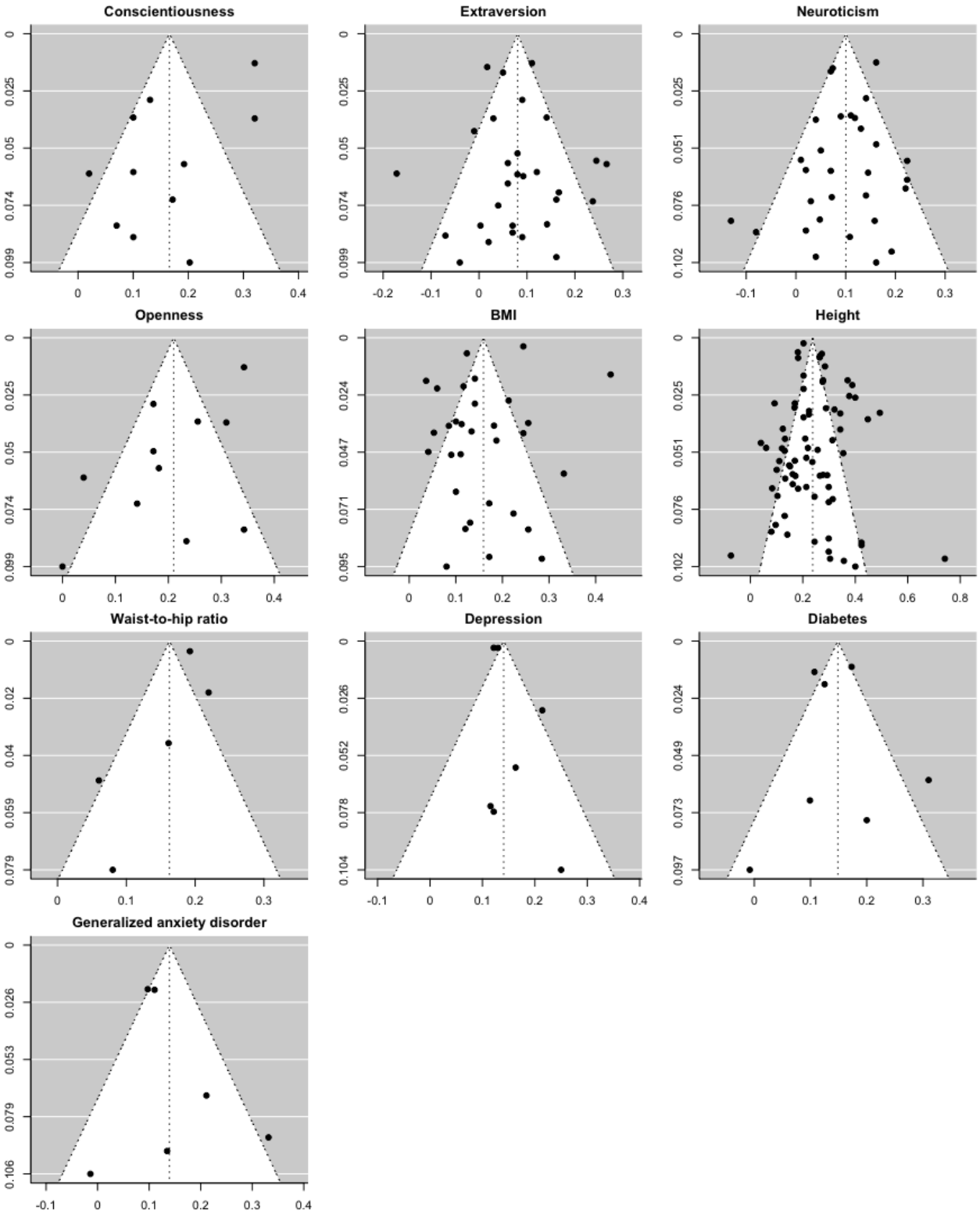

Generalized anxiety disorder
Study
Estimate [95% CI]
McLeod, J. D. (1995)
0.32 [0.16, 0.48]
Galbaud Du Fort, G., Bland, R. C., Newman, S. C. & Boothroyd, L. J. (1998)
0.13 [-0.05, 0.32]
Maes, H. H. et al. (1998)
0.21 [0.07, 0.34]
Maes, H. H. et al. (1998)
-0.01 [-0.22, 0.19]
Nordsletten, A. E. et al. (2016)
0.10 [0.06, 0.14]
Nordsletten, A. E. et al. (2016)
0.11 [0.07, 0.15]
RE Model
0.14 [0.04, 0.24]
-0.4
-0.2
0
0.2
0.4
0.6
spousal correlation

Supplementary Figure 1. Forest plots depicting the random effects effect sizes reported for each study (in the form of correlations) and their 95% confidence intervals. The estimates within each phenotype are sorted by year of publication (from top to bottom) and are color-coded to indicate the region from which the sample was taken, as indicated in the legend. Asterisks listed next to the studies' authors indicate that the sample was predominantly made-up of a racial group that is not the majority demographic in the region from which it was sampled. For the same trend in forest plots in which numbers were used in place of author names, see corresponding authors at the end of the document.

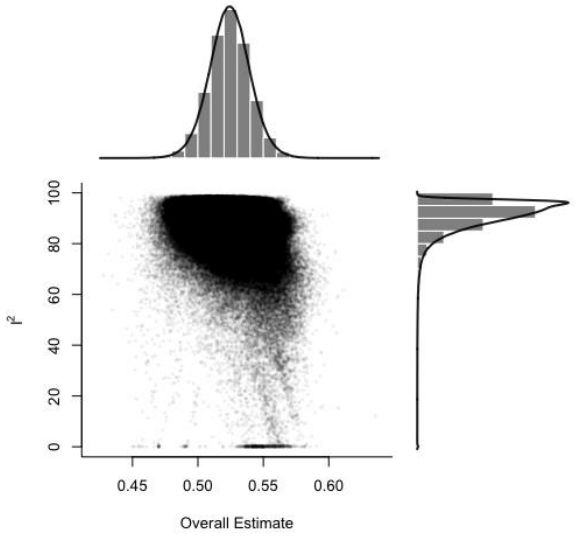


Supplementary Figure 2. The fixed effects meta-analyzed spousal correlations and 95% confidence intervals for each phenotype.

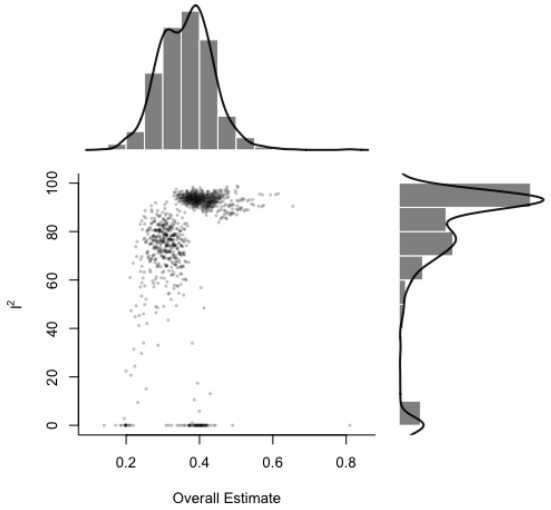

Educational attainment
Intelligence quotient
Political values
Religiosity
Alcohol use disorder
Drinking quantity
Smoking cessation
Smoking initiation
Smoking quantity
Smoking status
Substance use disorder
Agreeableness



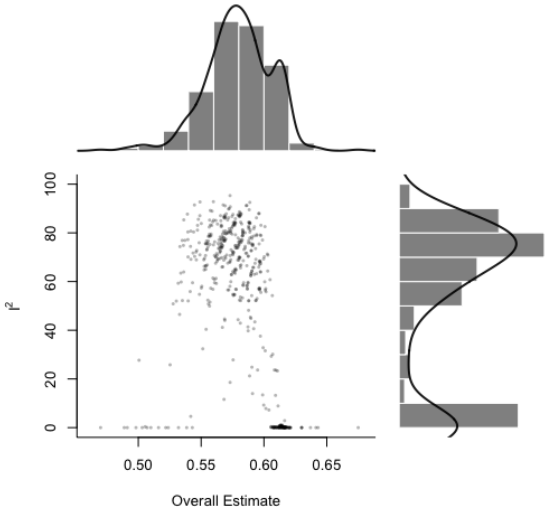
Supplementary Figure 3. Funnel plots, designed to assess possible publication bias for each study by comparing the Fisher's z transformed correlations to their standard errors. For dichotomous traits, standard error was estimated based on the effective sample size (see main text).



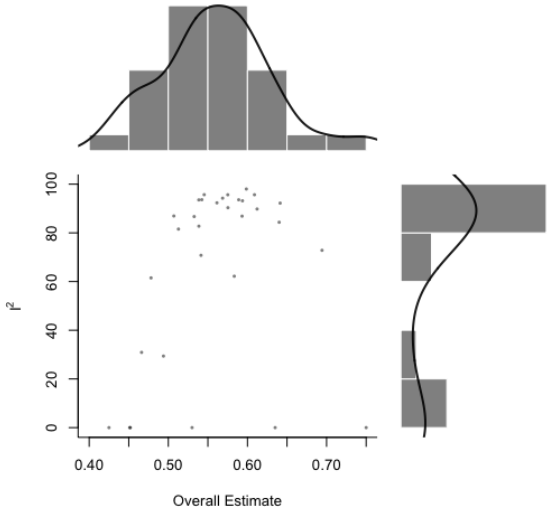
Educational attainment



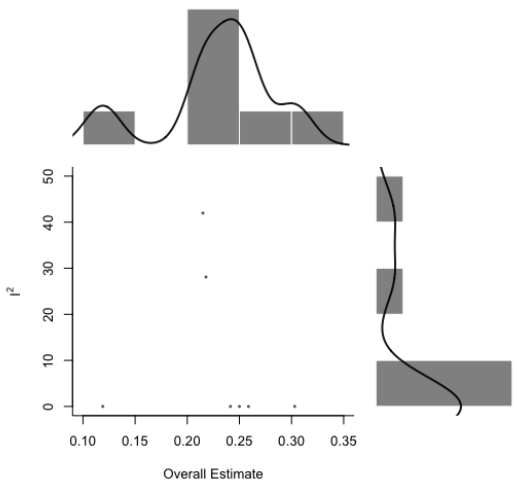
Intelligence quotient



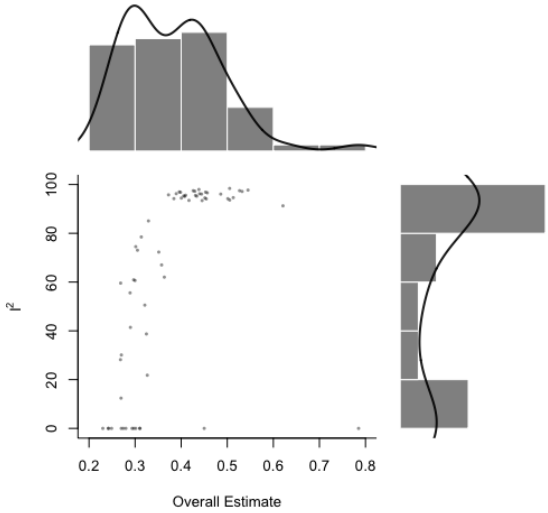
Political values



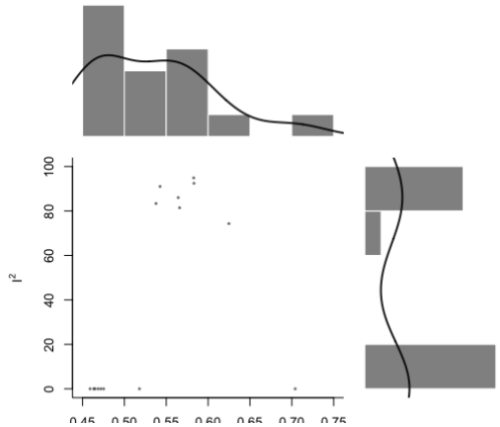
Religiosity



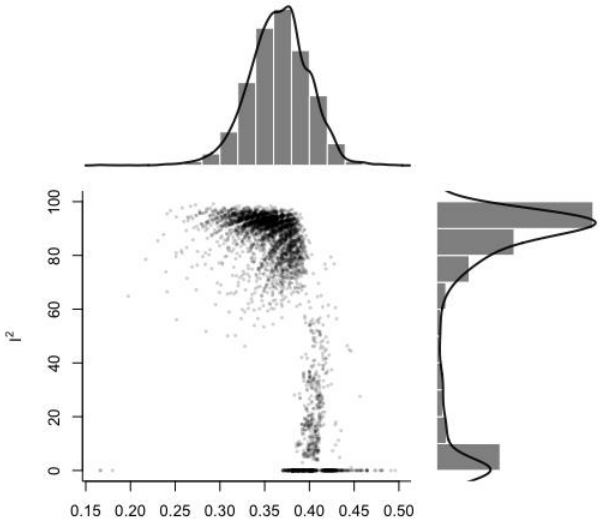
Alcohol use disorder



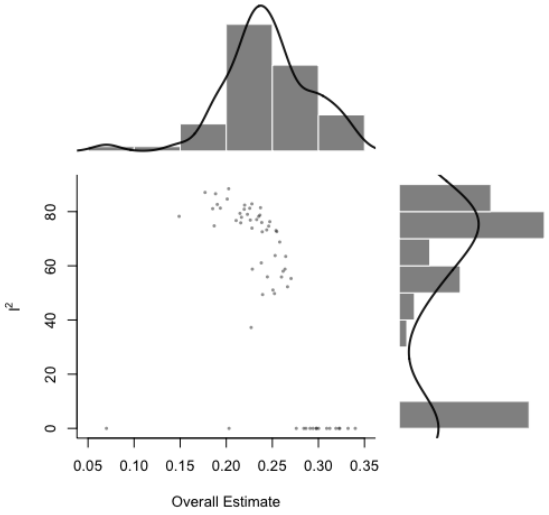
Drinking quantity



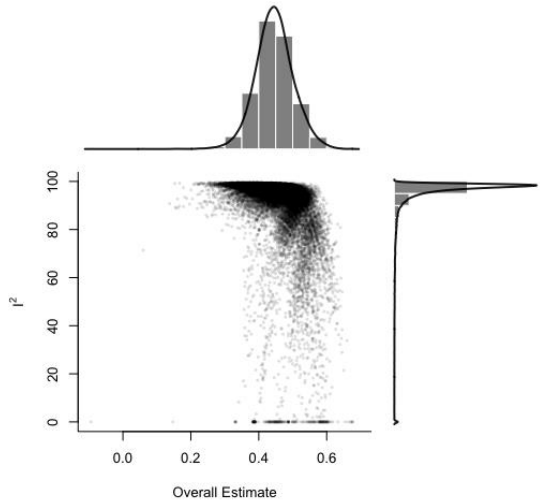
Smoking cessation



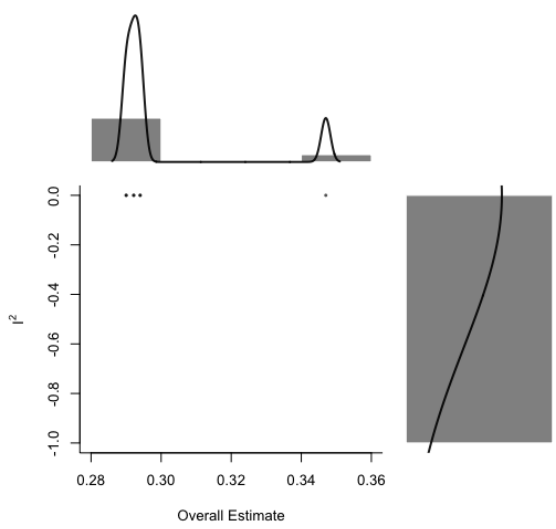
Smoking initiation



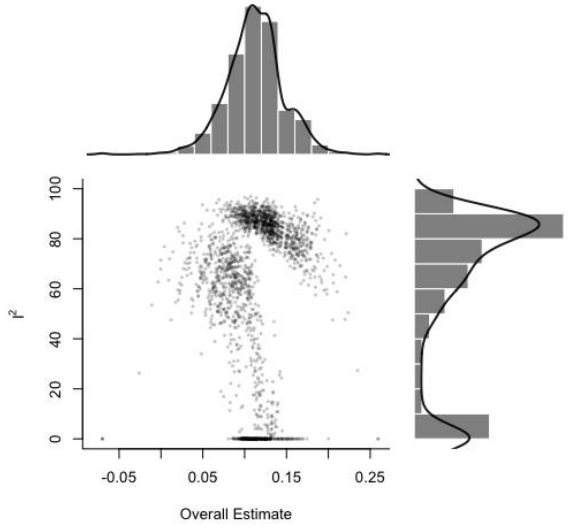
Smoking quantity



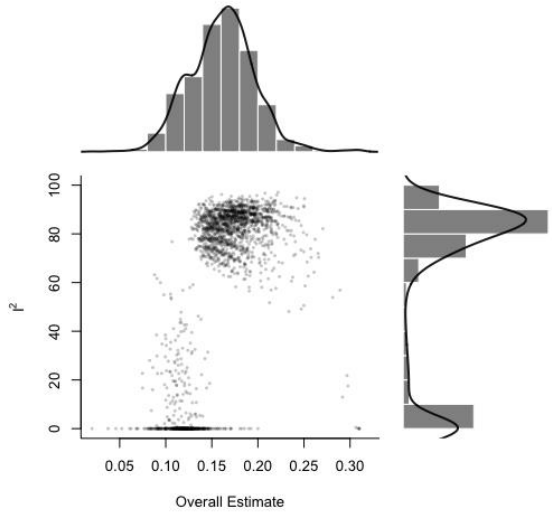
Smoking status



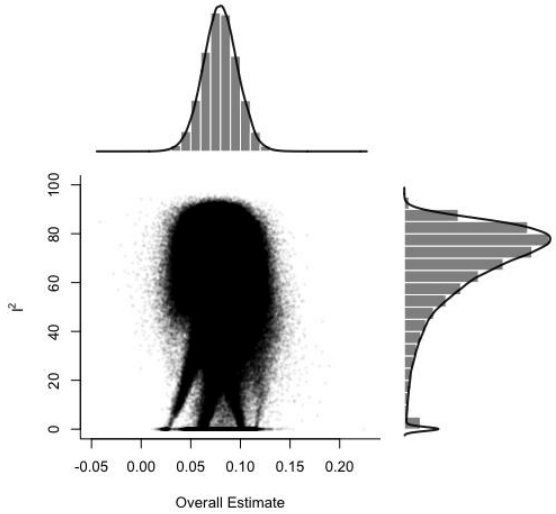
Substance use disorder



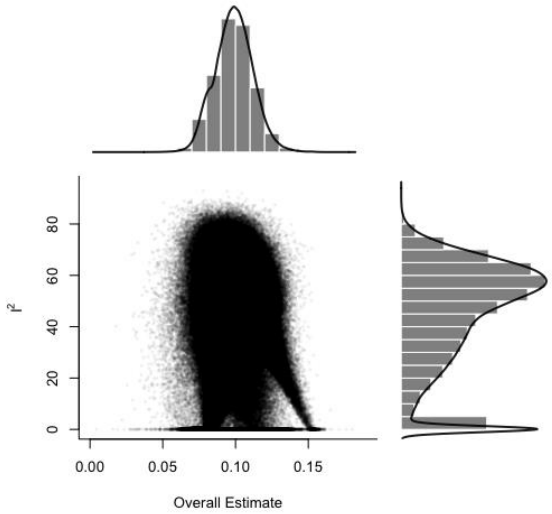
Agreeableness



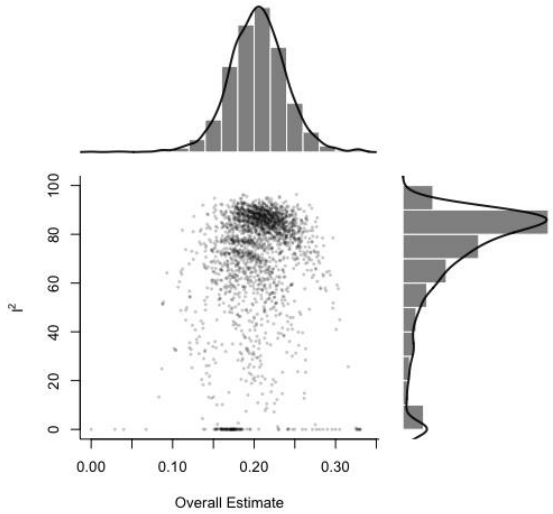
Conscientiousness



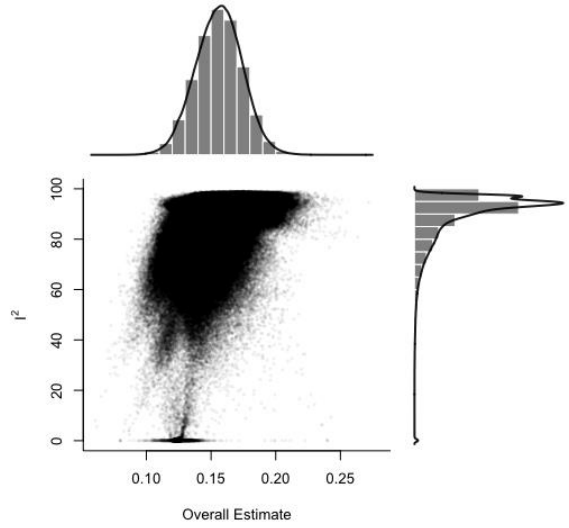
Extraversion



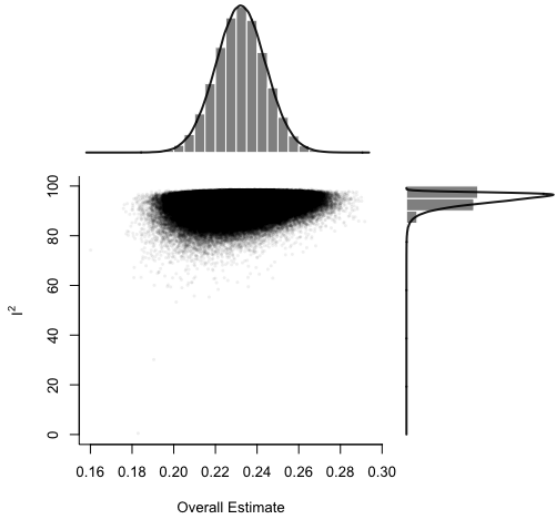
Neuroticism



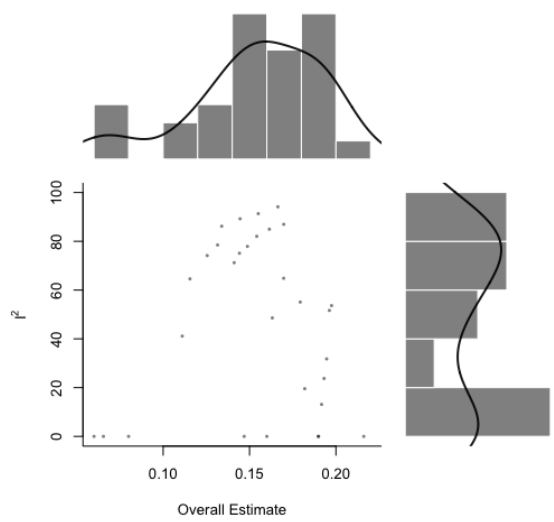
Openness



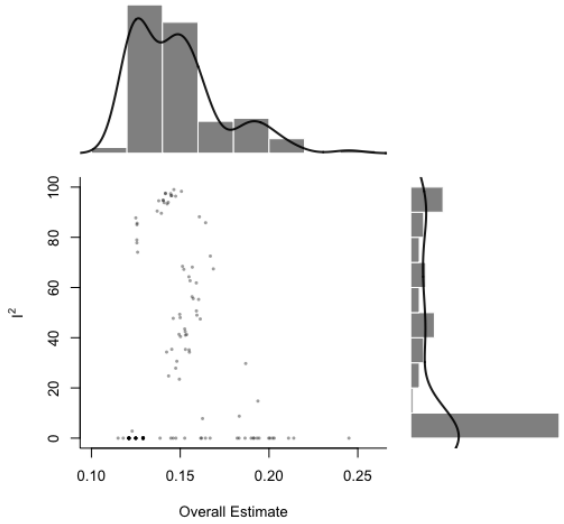
Body mass index



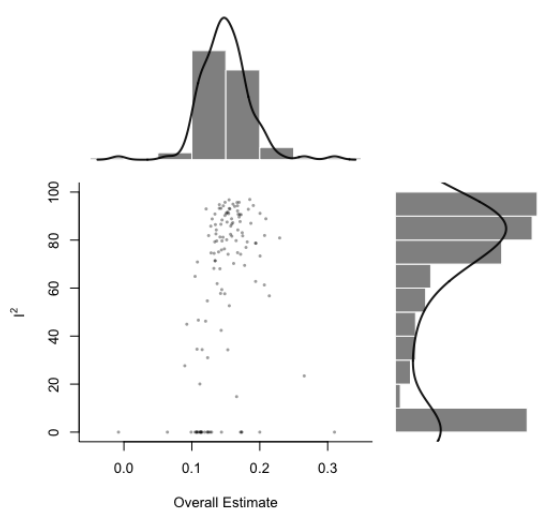
Height



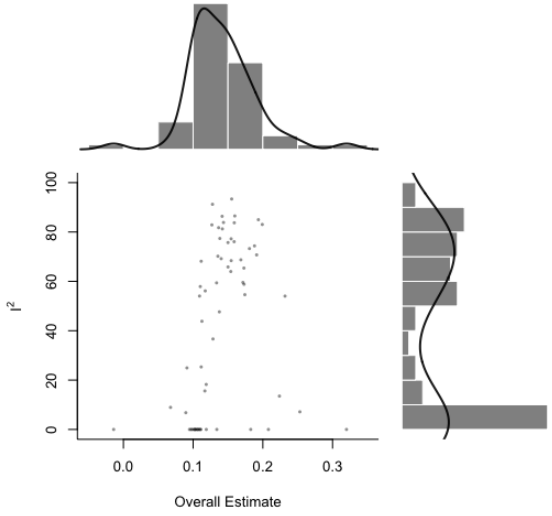
Waist-to-hip ratio



Depression



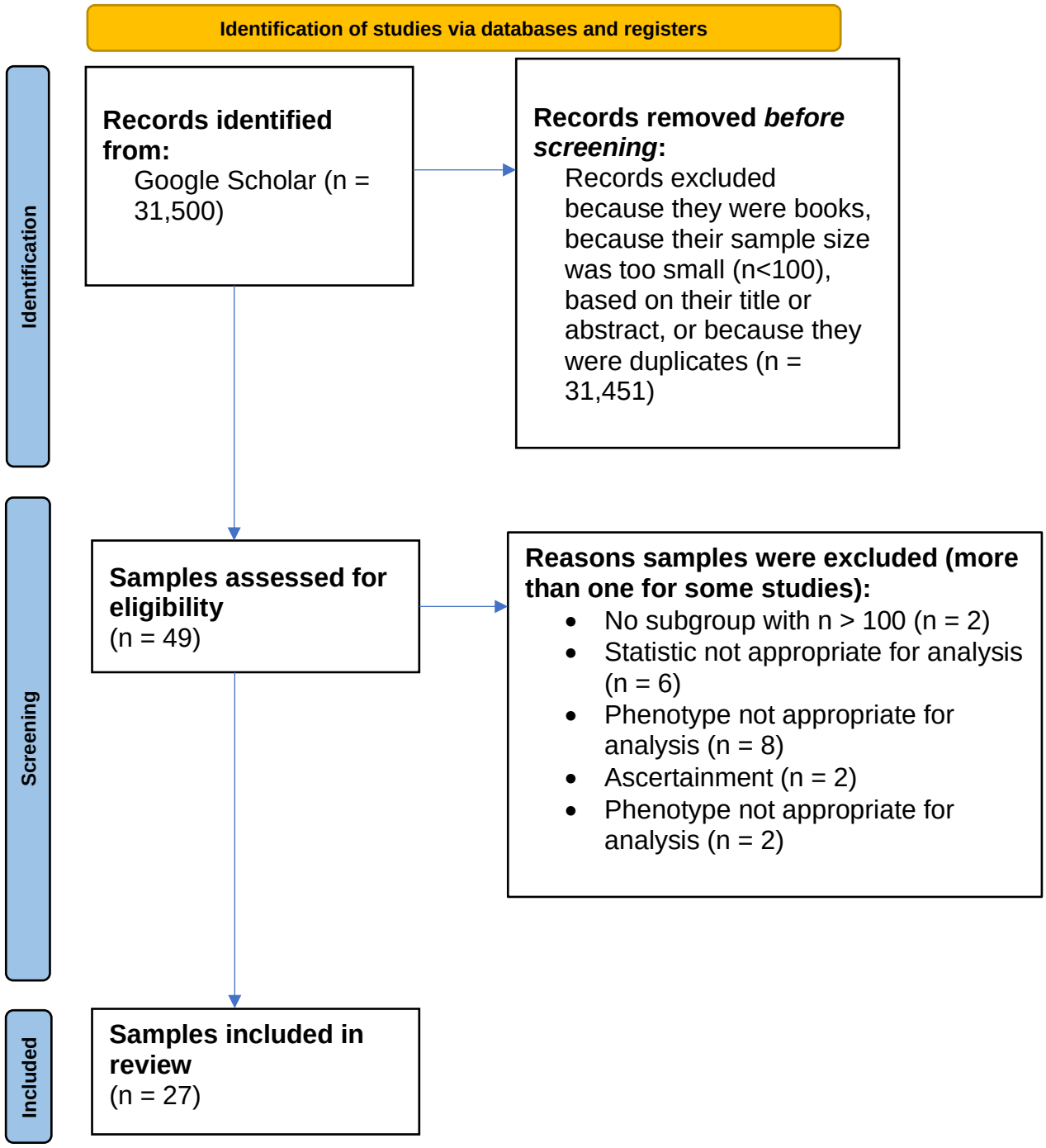
Diabetes

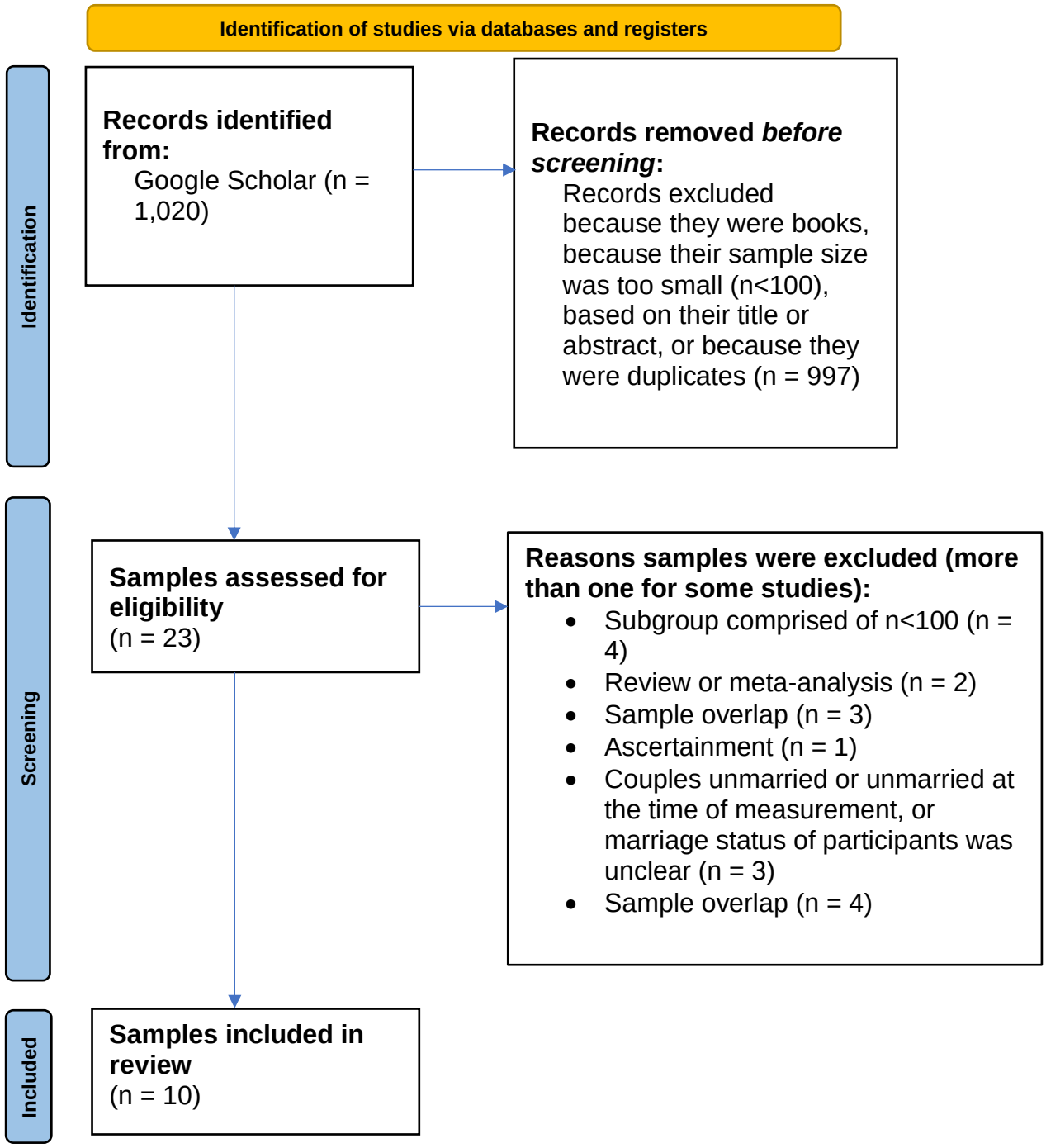


Generalized anxiety disorder

Supplementary Figure 4. Graphic Display of Heterogeneity (GOSH) plots depicting the meta-analyzed correlation against the Higgins & Thompson's I^2 index of heterogeneity for all 2^{k-1} (up to 1 million) possible study combinations for each phenotype.

Educational attainment

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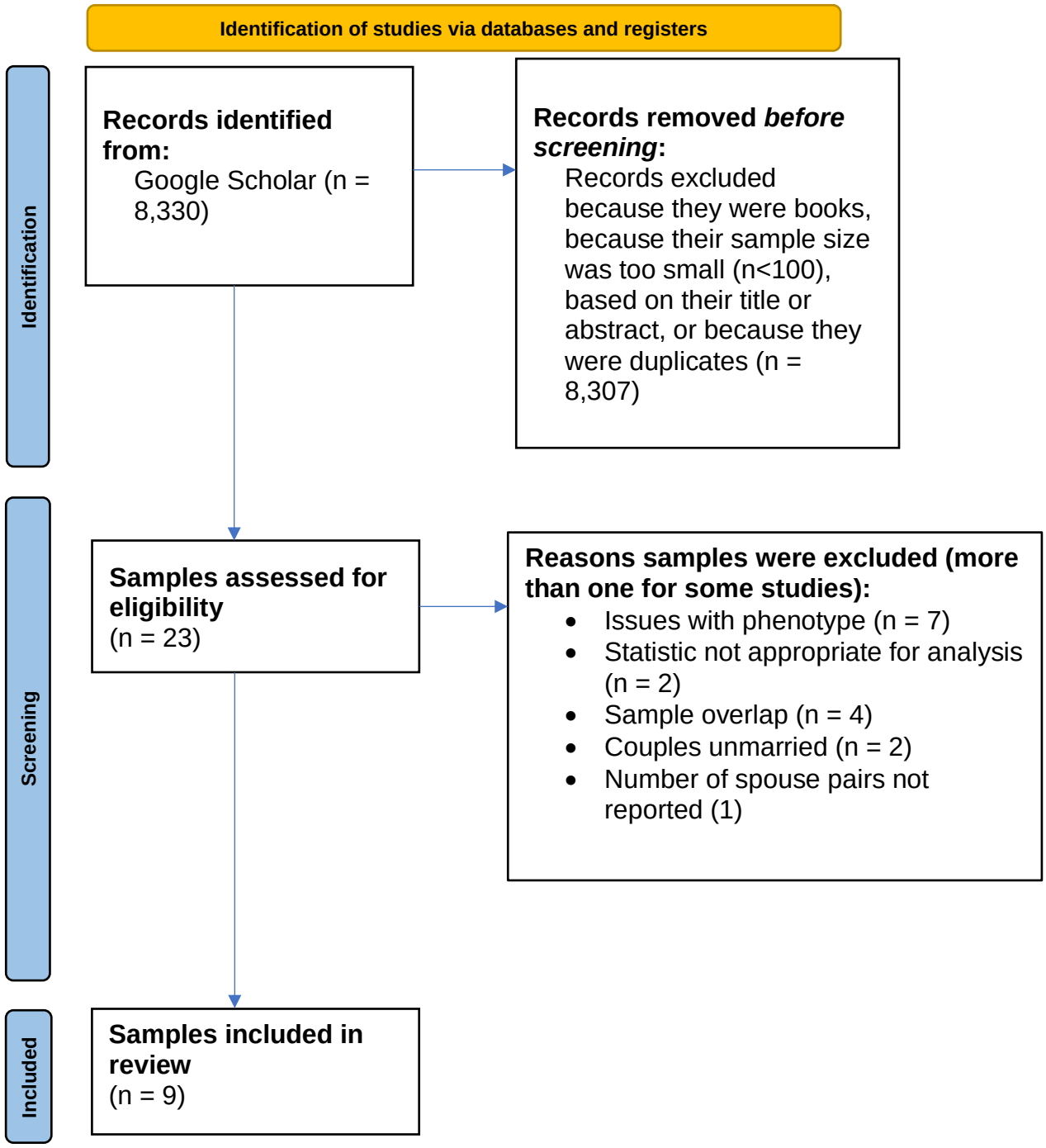
Records removed *before screening*:
Records excluded because they were books, because their sample size was too small (n<100), based on their title or abstract, or because they were duplicates (n = 997)
Screening
Samples assessed for eligibility
(n = 23)
Reasons samples were excluded (more than one for some studies):
Subgroup comprised of n<100 (n = 4)
Review or meta-analysis (n = 2)
Sample overlap (n = 3)
Ascertainment (n = 1)
Couples unmarried or unmarried at the time of measurement, or marriage status of participants was unclear (n = 3)
Sample overlap (n = 4)
Included
Samples included in review
(n = 10)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Records removed *before screening*:
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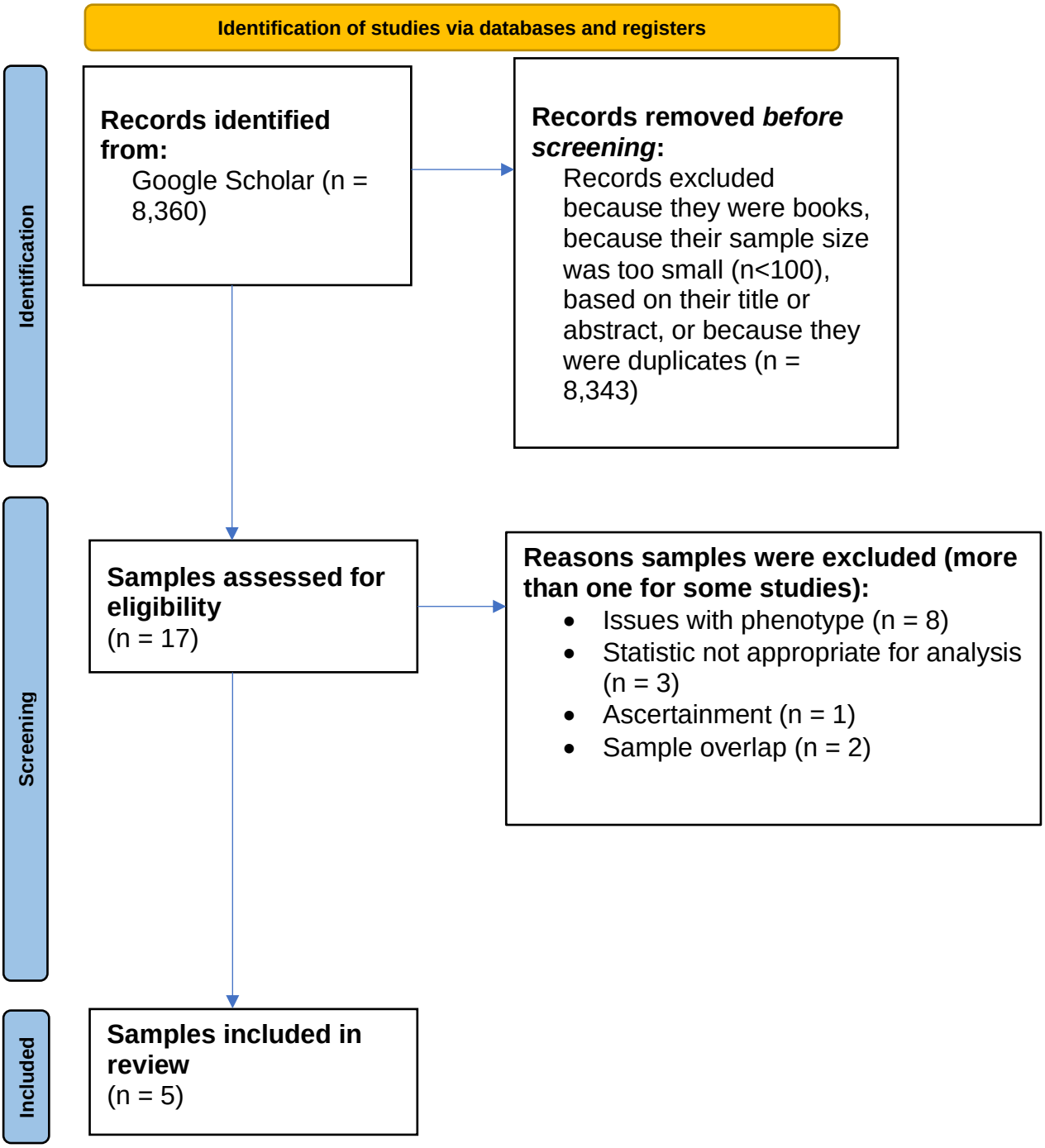
Screening
Samples assessed for eligibility
(n = 23)
Reasons samples were excluded (more than one for some studies):
Issues with phenotype (n = 7)
Statistic not appropriate for analysis (n = 2)
Sample overlap (n = 4)
Couples unmarried (n = 2)
Number of spouse pairs not reported (1)
Included
Samples included in review
(n = 9)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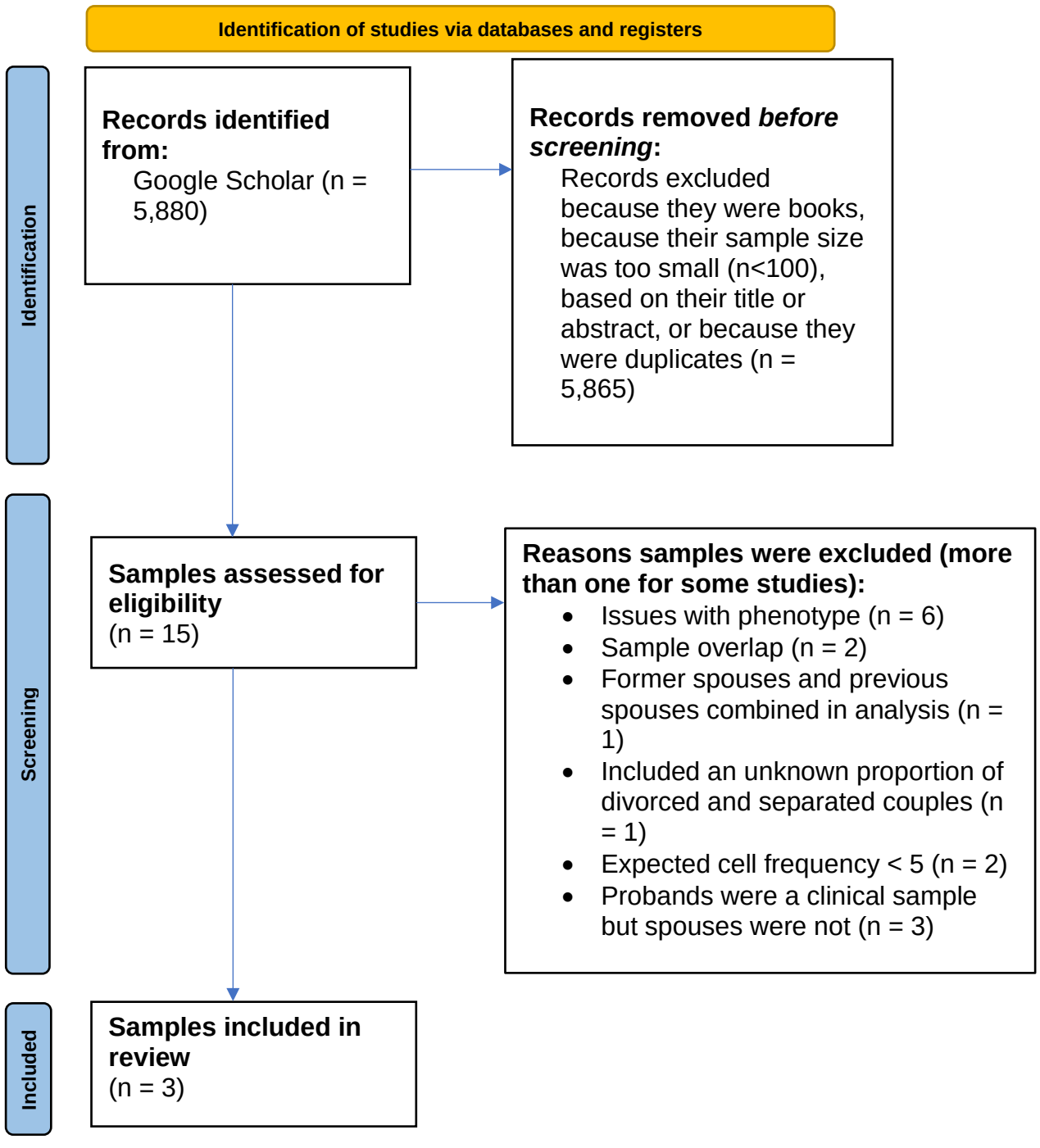
Screening
Samples assessed for eligibility
(n = 17)
Reasons samples were excluded (more than one for some studies):
Issues with phenotype (n = 8)
Statistic not appropriate for analysis (n = 3)
Ascertainment (n = 1)
Sample overlap (n = 2)
Included
Samples included in review
(n = 5)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Identification
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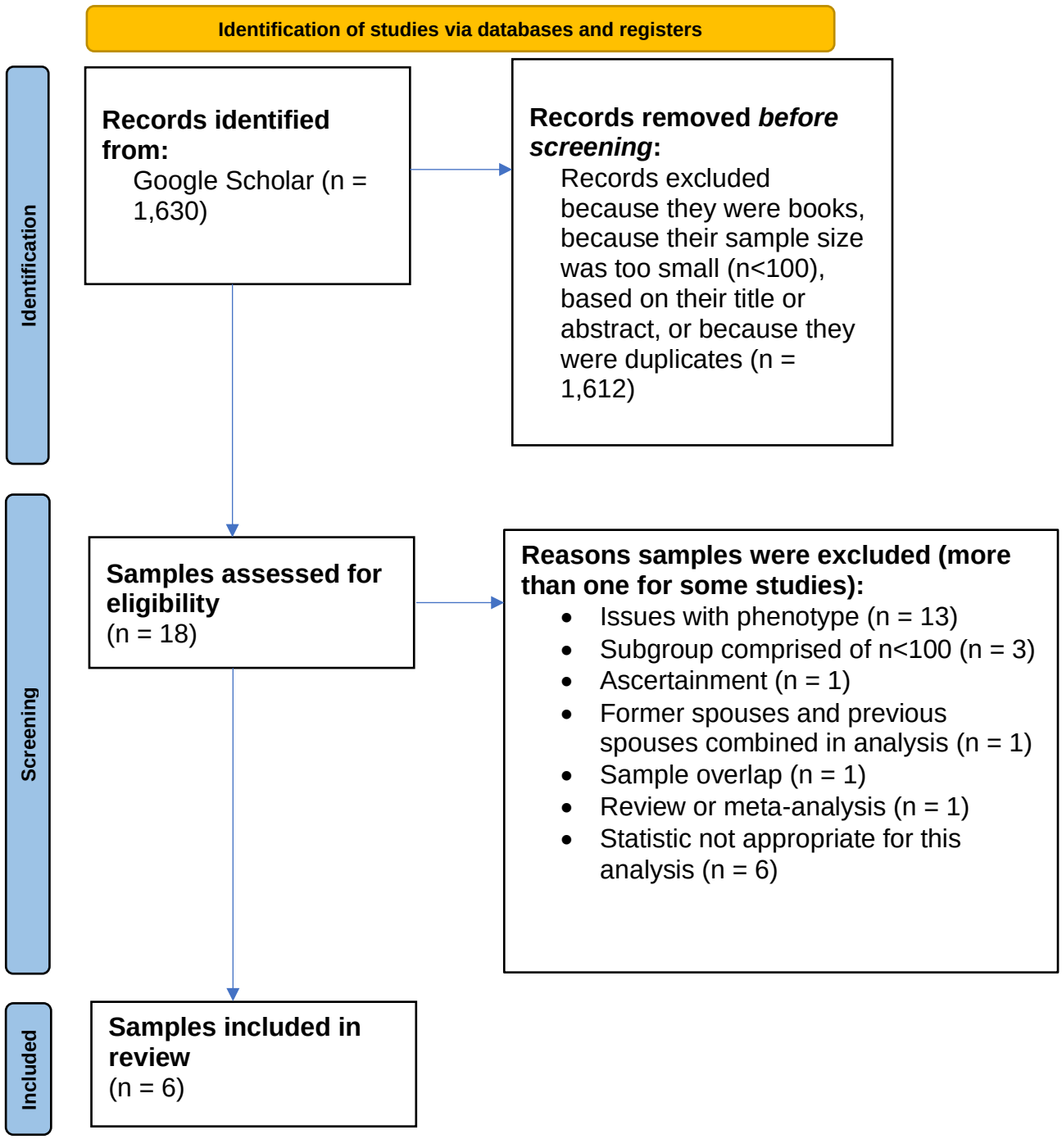
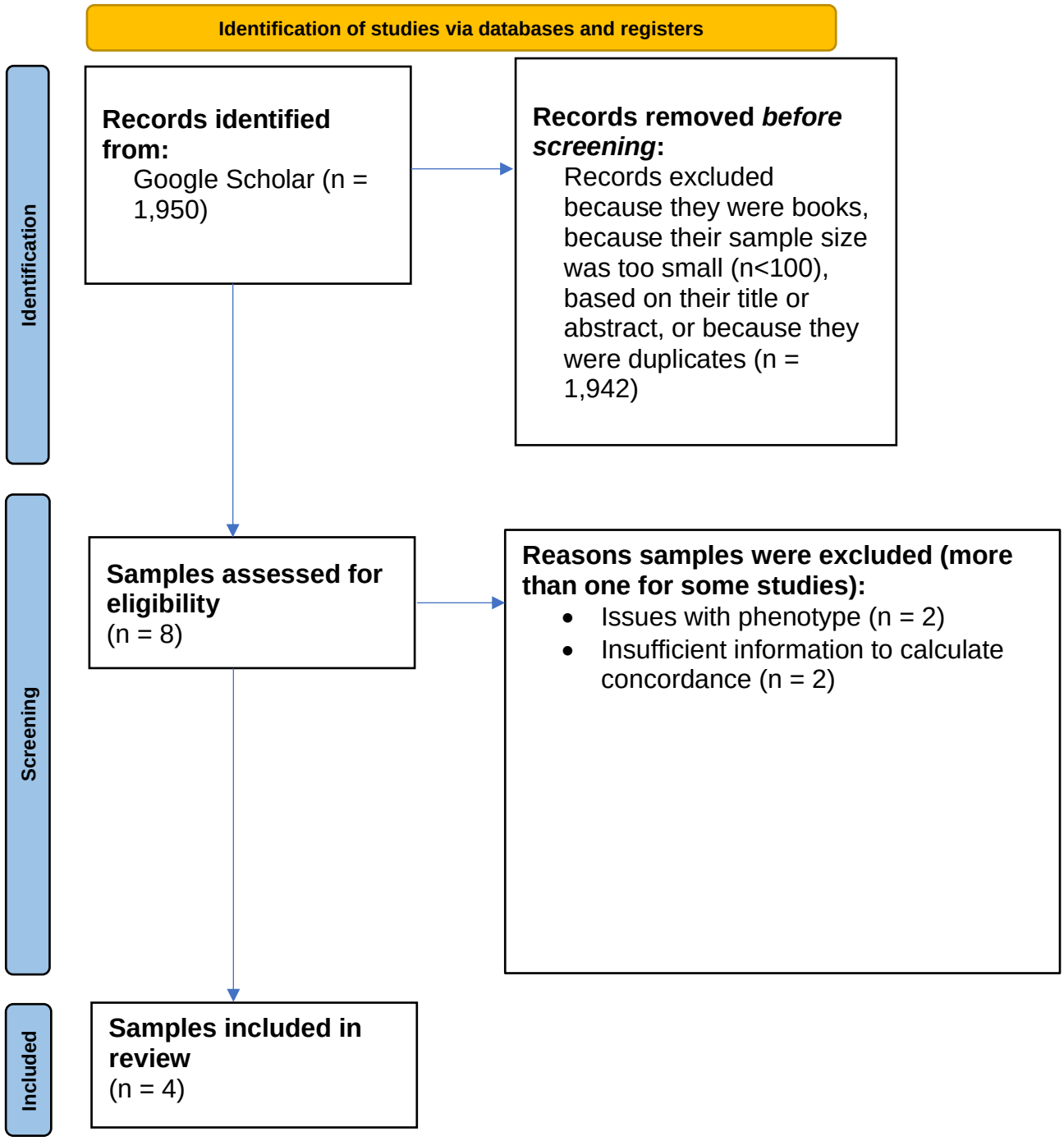
Screening
Samples assessed for eligibility
(n = 15)
Reasons samples were excluded (more than one for some studies):
Issues with phenotype (n = 6)
Sample overlap (n = 2)
Former spouses and previous spouses combined in analysis (n = 1)
Included an unknown proportion of divorced and separated couples (n = 1)
Expected cell frequency < 5 (n = 2)
Probands were a clinical sample but spouses were not (n = 3)
Included
Samples included in review
(n = 3)

Drinking quantity




Identification of studies via databases and registers
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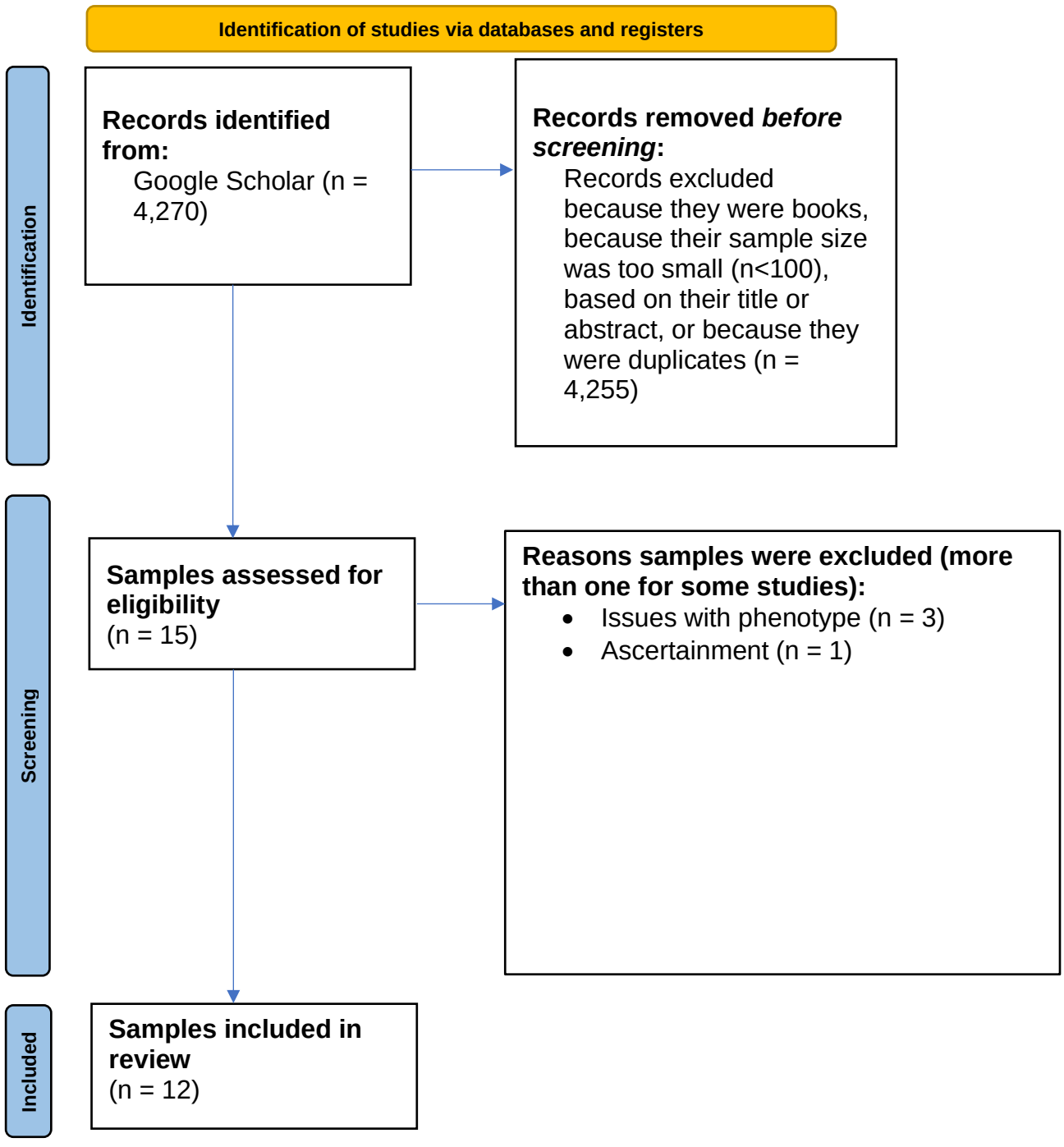
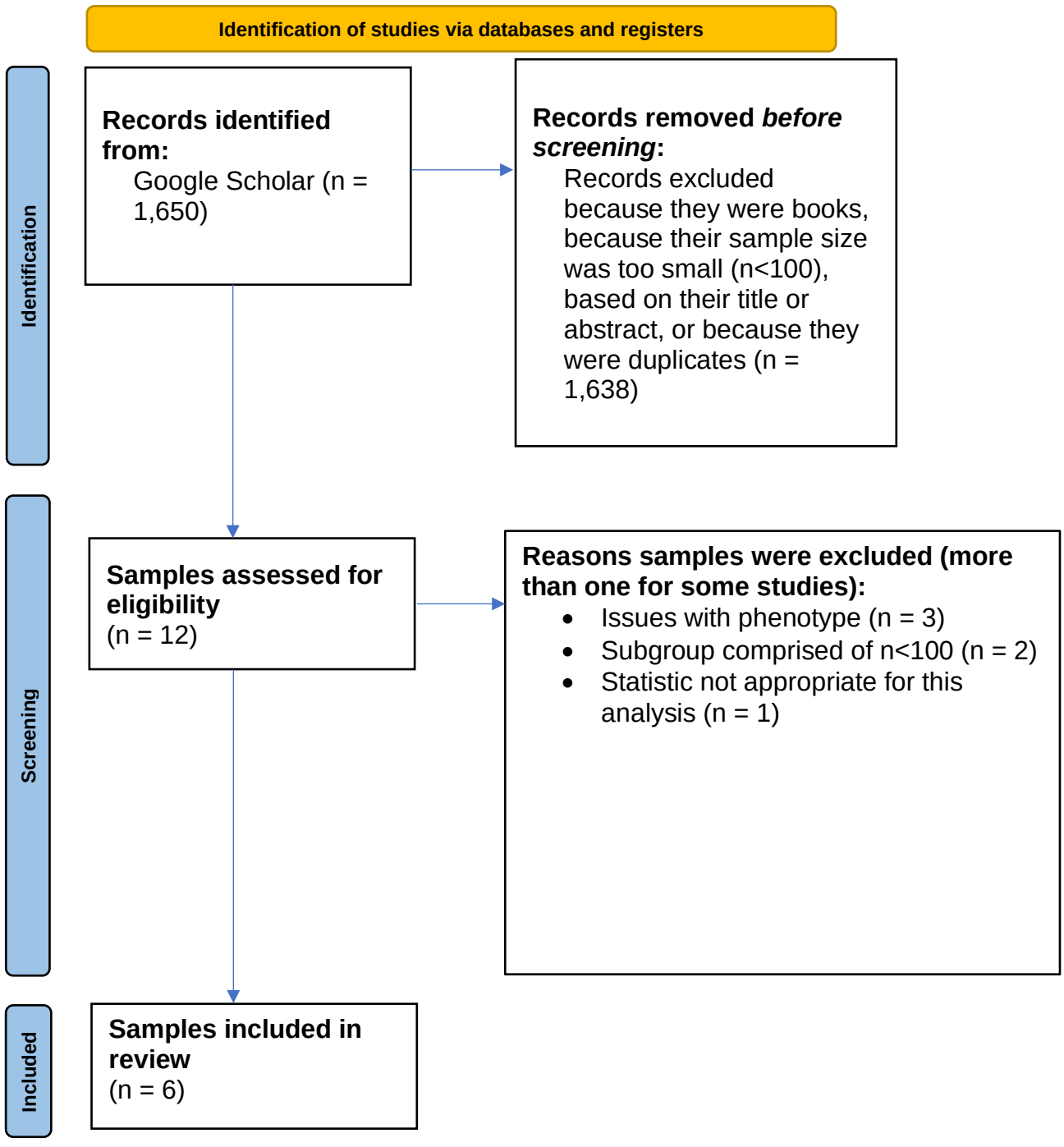
Screening
Samples assessed for eligibility
(n = 8)
Reasons samples were excluded (more than one for some studies):
Issues with phenotype (n = 2)
Insufficient information to calculate concordance (n = 2)
Included
Samples included in review
(n = 4)

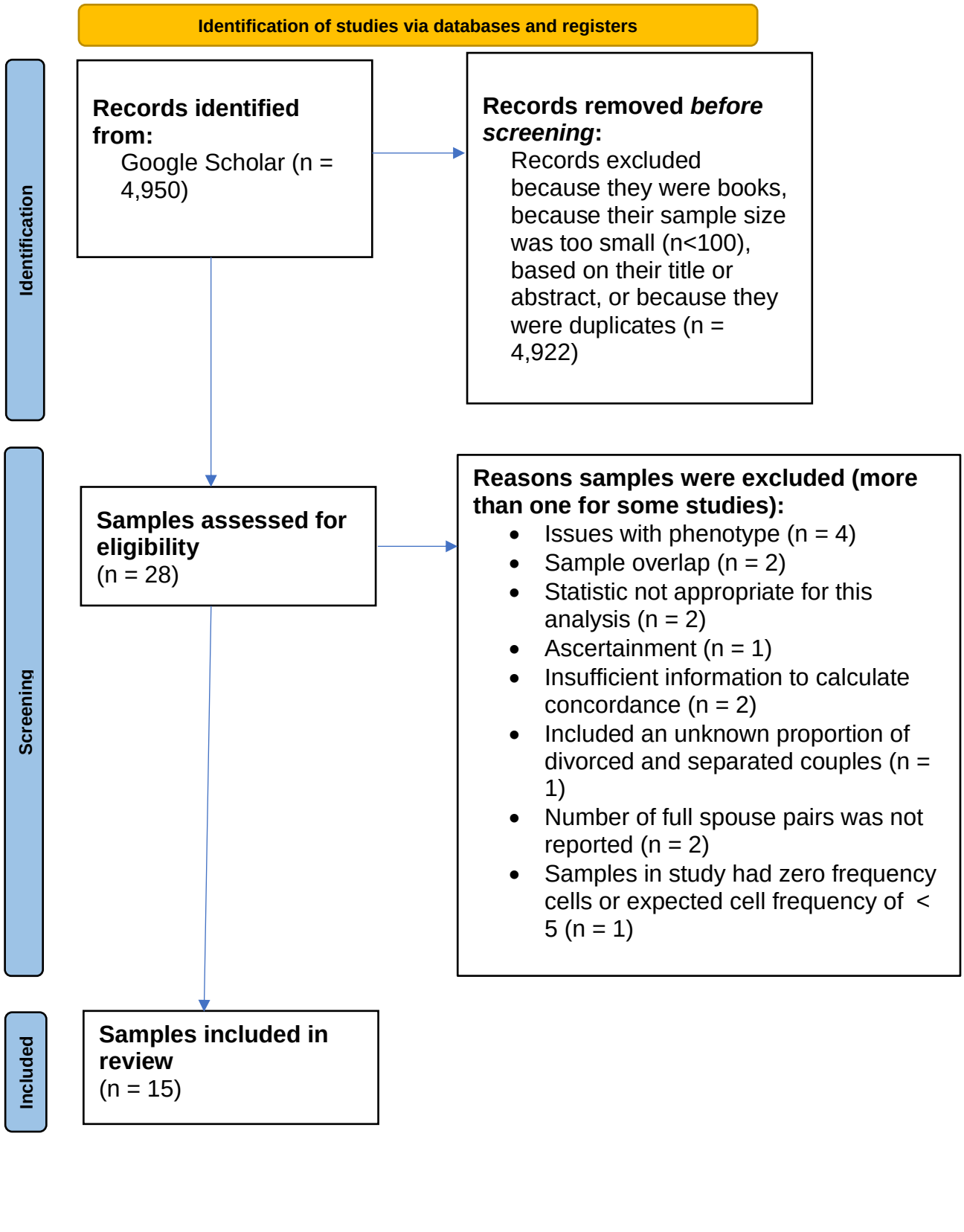
Smoking initiation

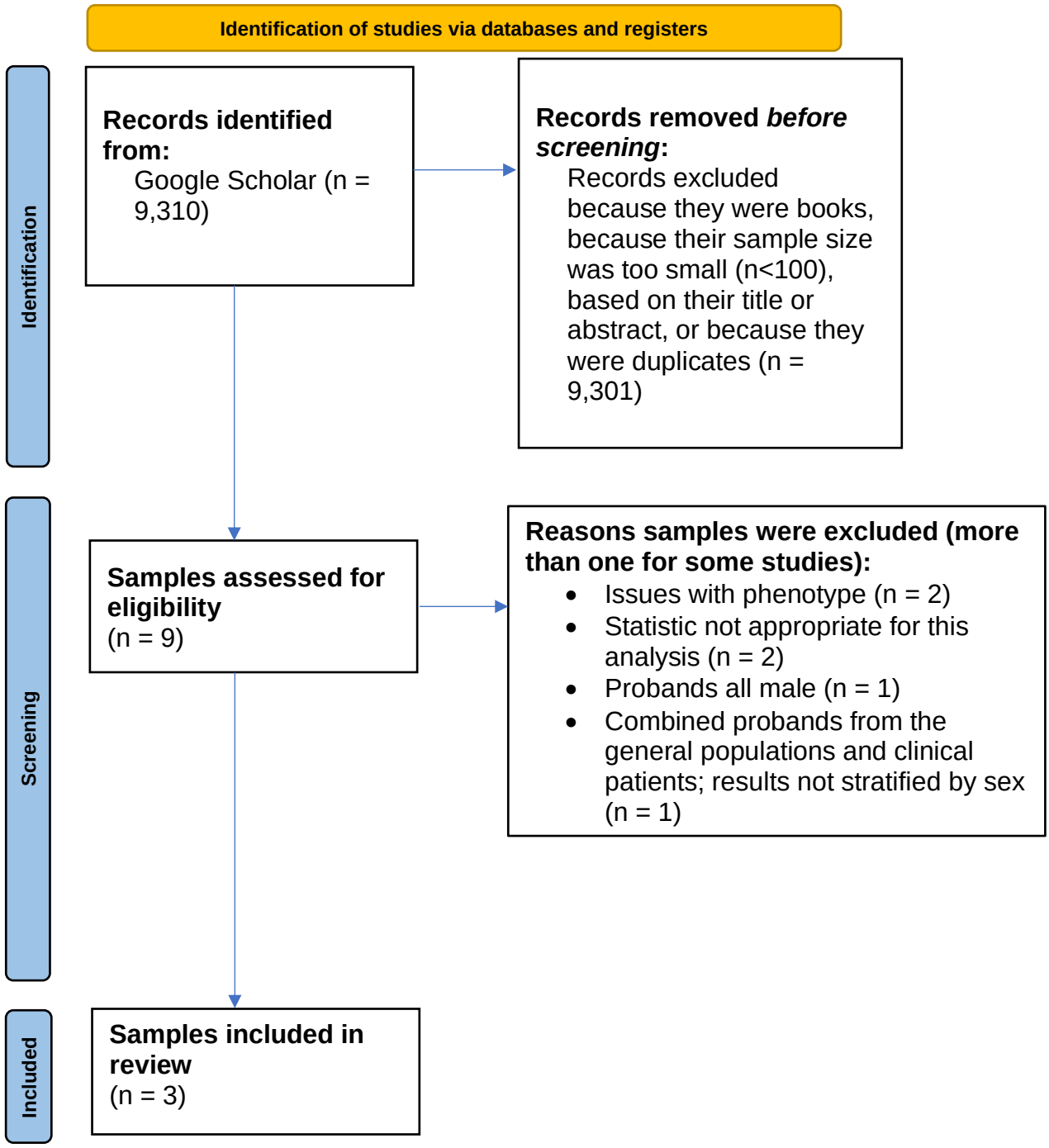


Smoking quantity



Smoking status

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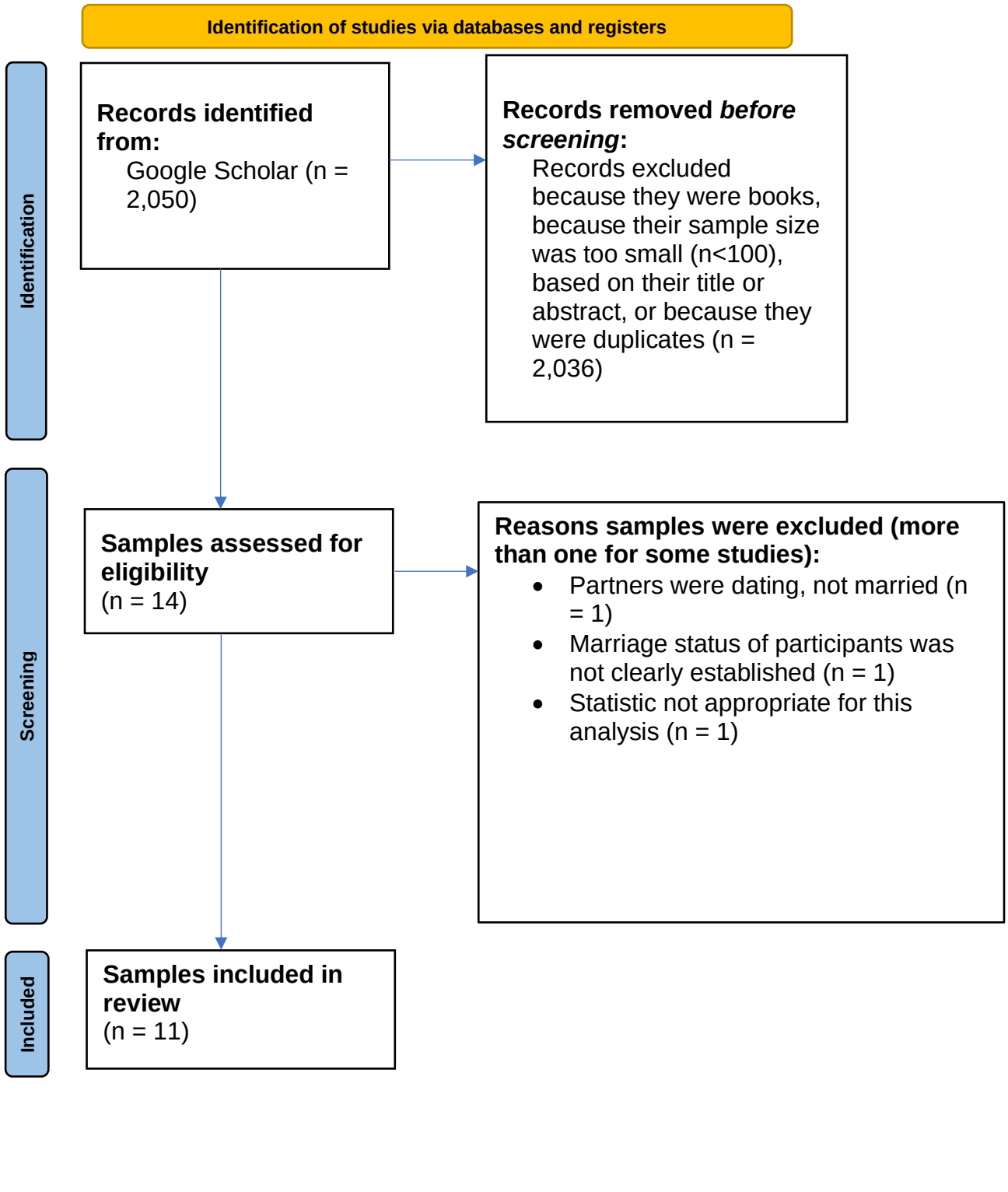
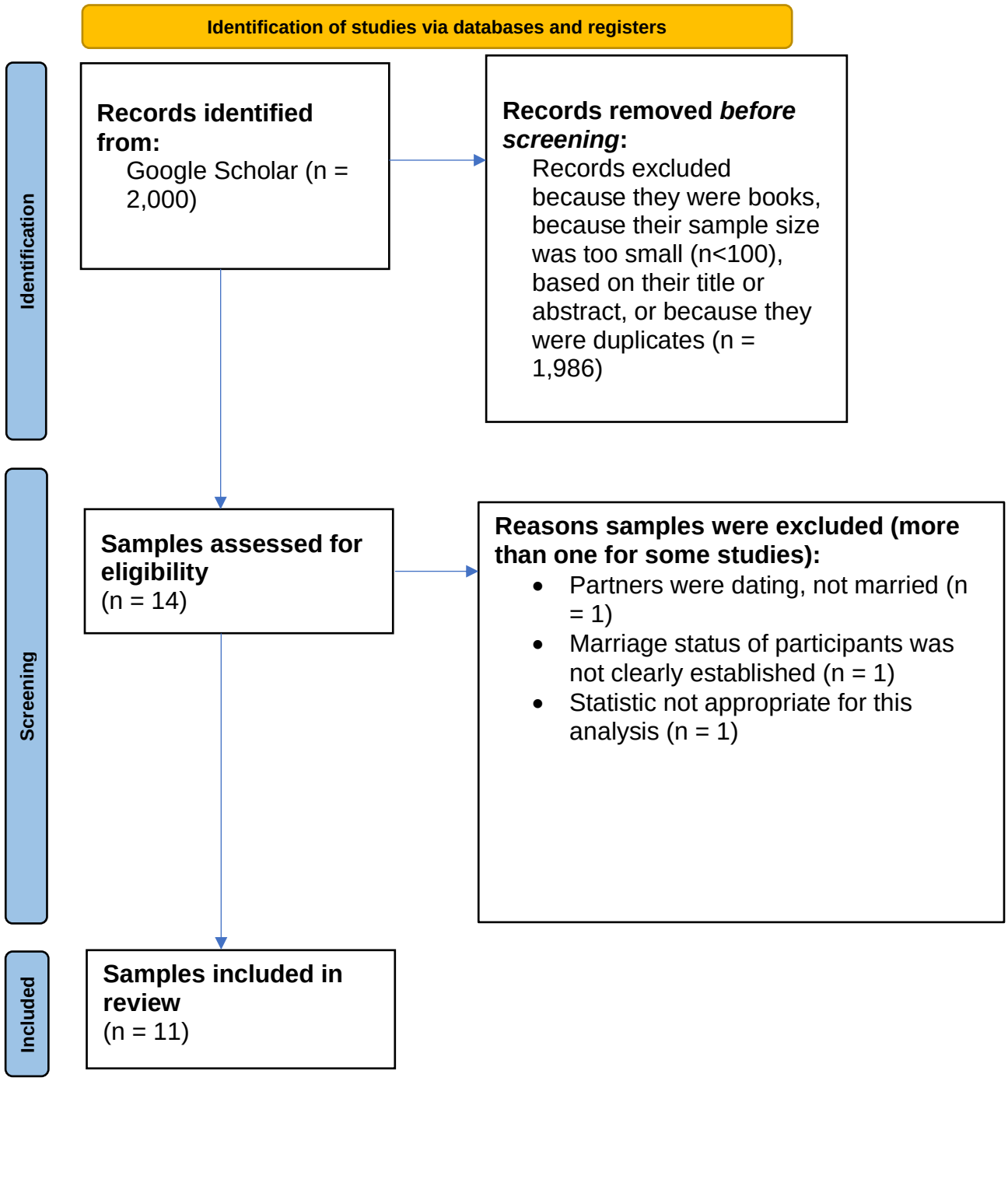
Screening
Samples assessed for eligibility
(n = 9)
Reasons samples were excluded (more than one for some studies):
Issues with phenotype (n = 2)
Statistic not appropriate for this analysis (n = 2)
Probands all male (n = 1)
Combined probands from the general populations and clinical patients; results not stratified by sex (n = 1)
Included
Samples included in review
(n = 3)

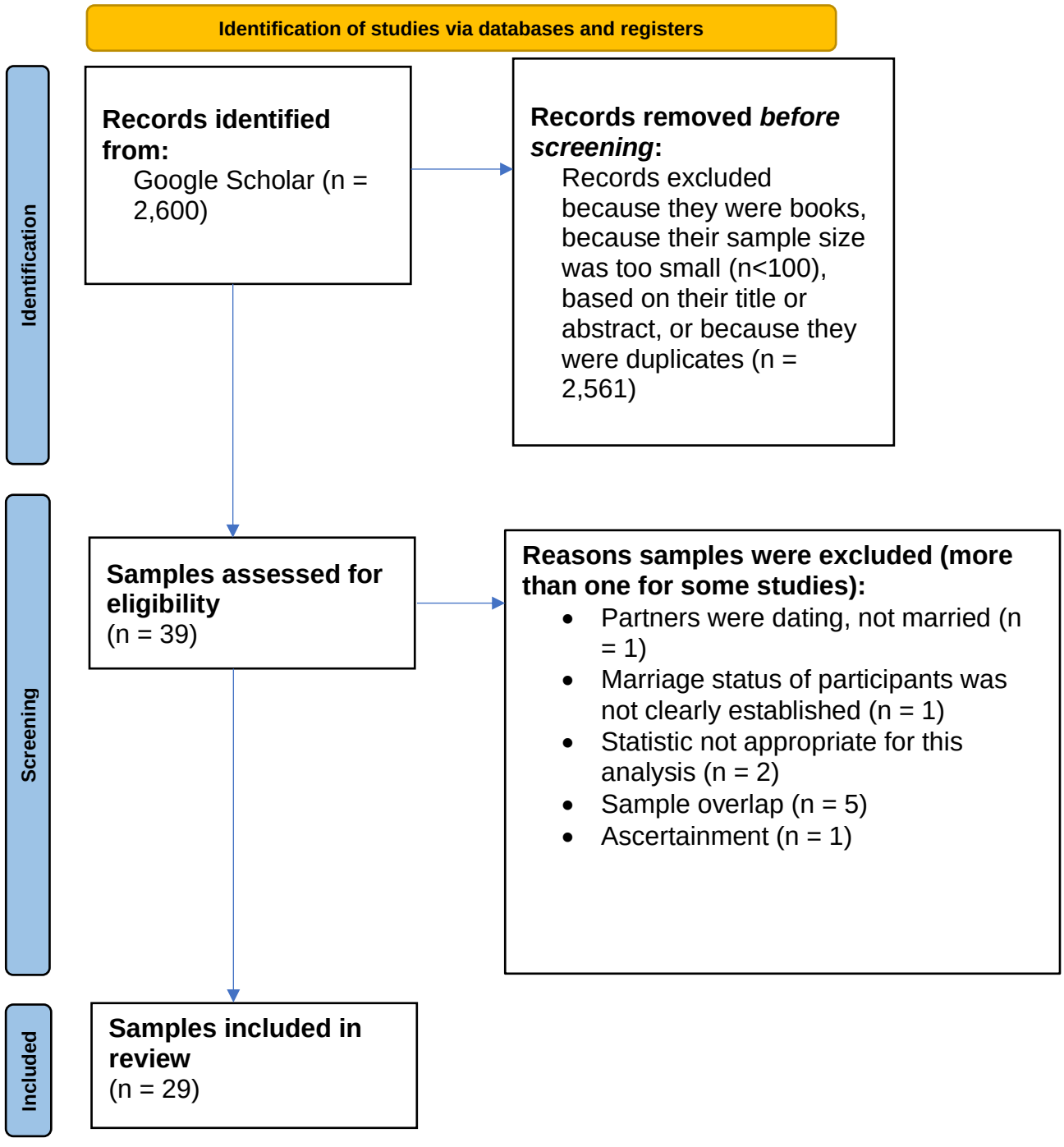
Agreeableness

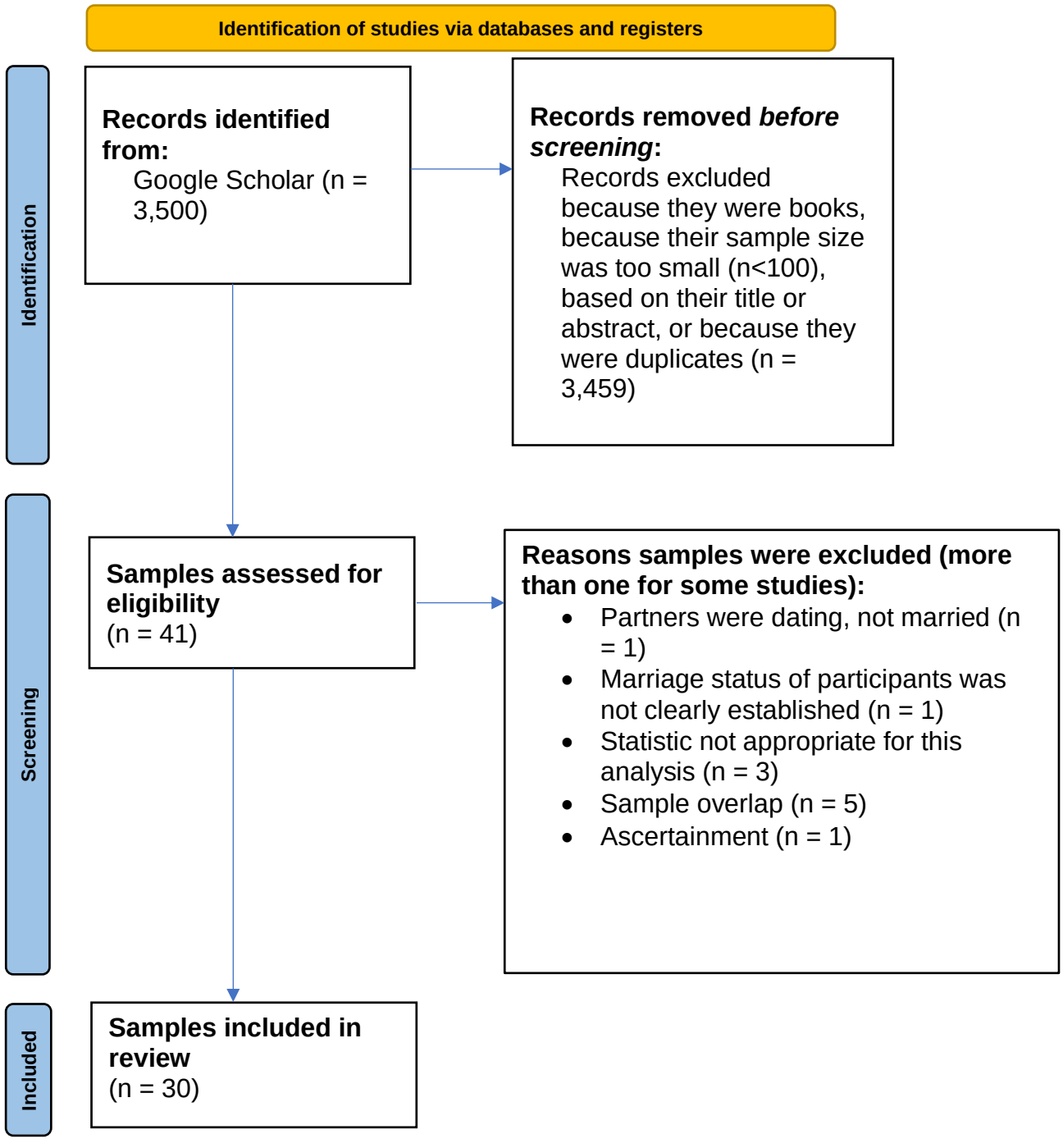


Conscientiousness



Extraversion

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Identification
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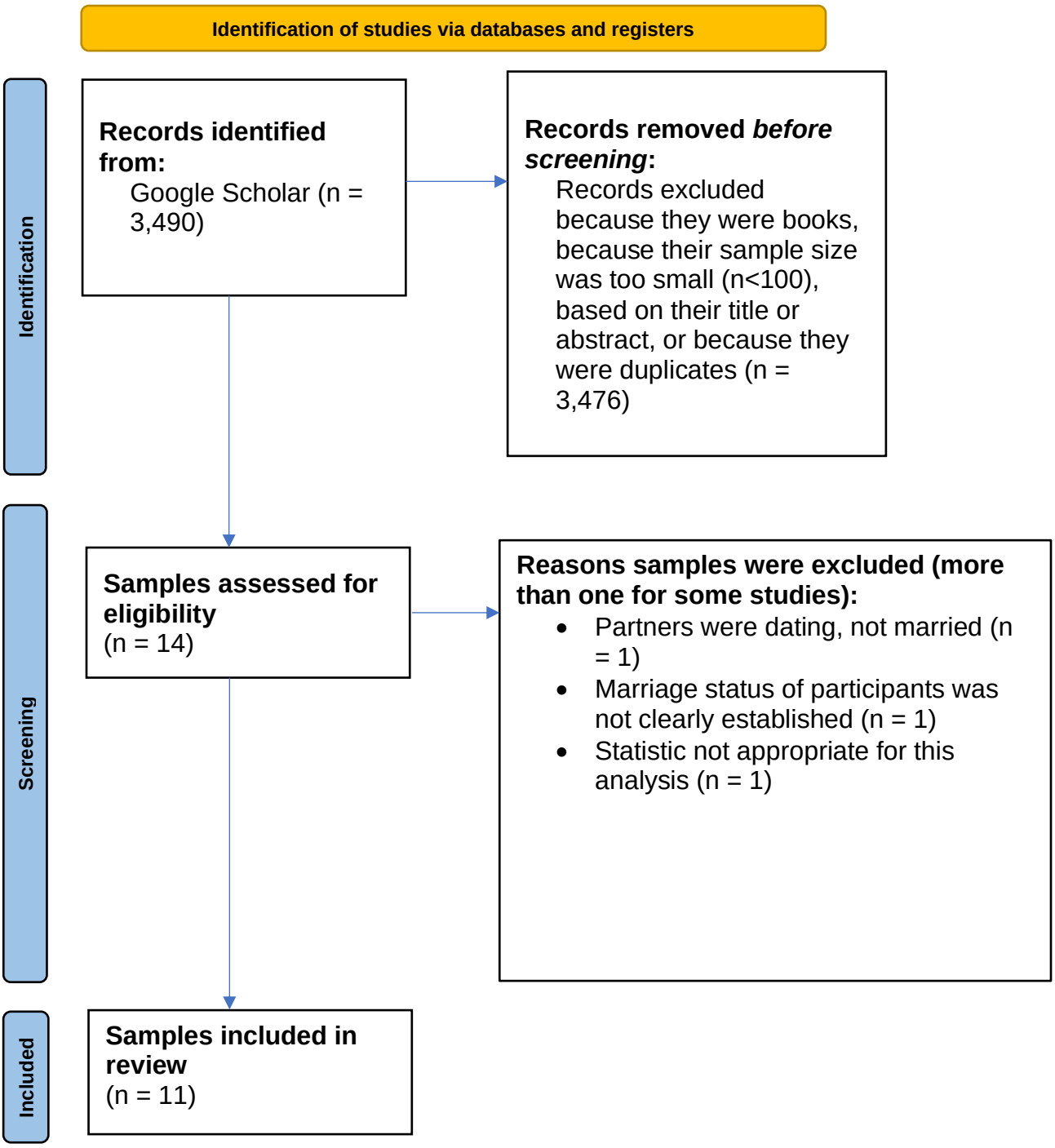
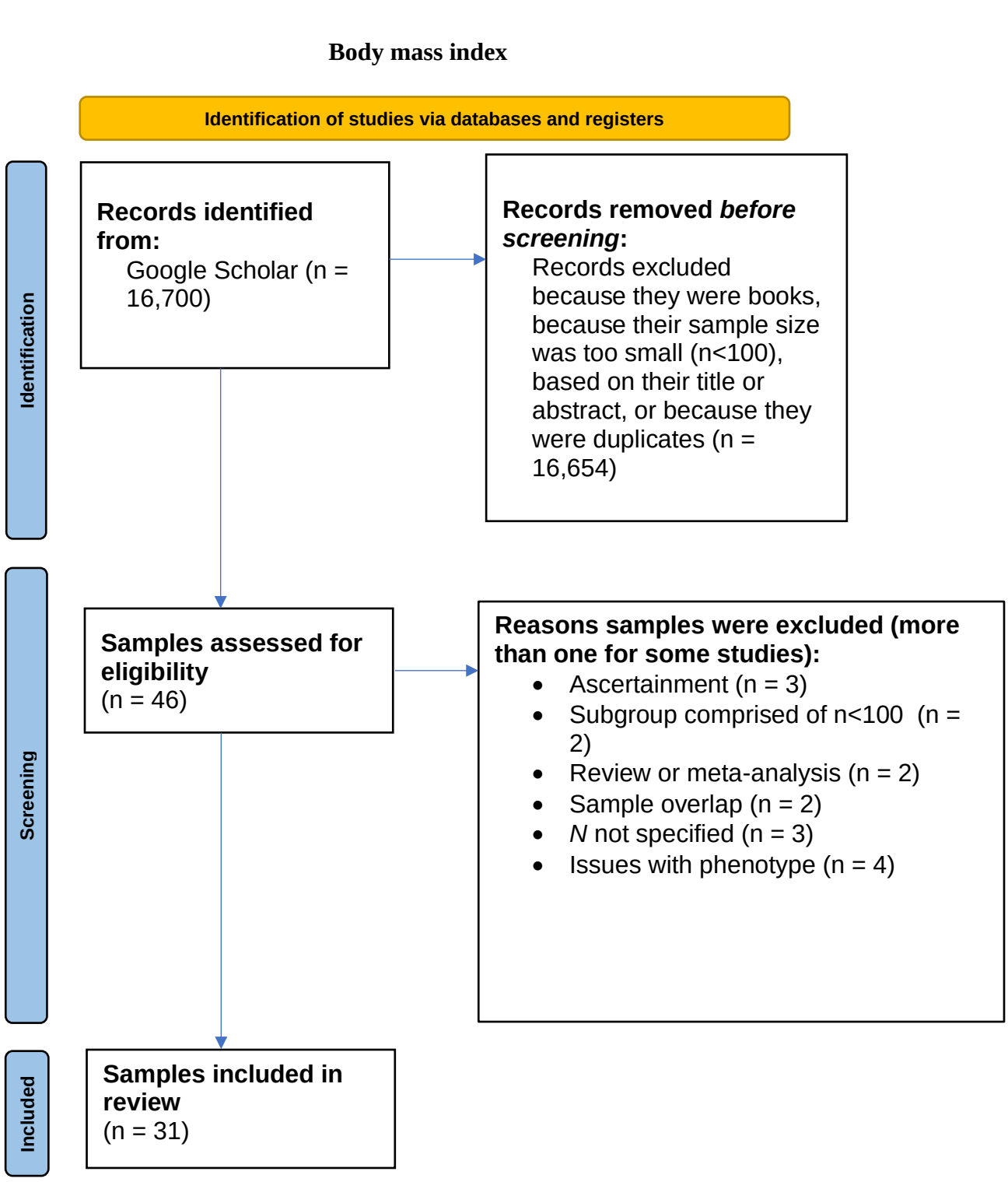
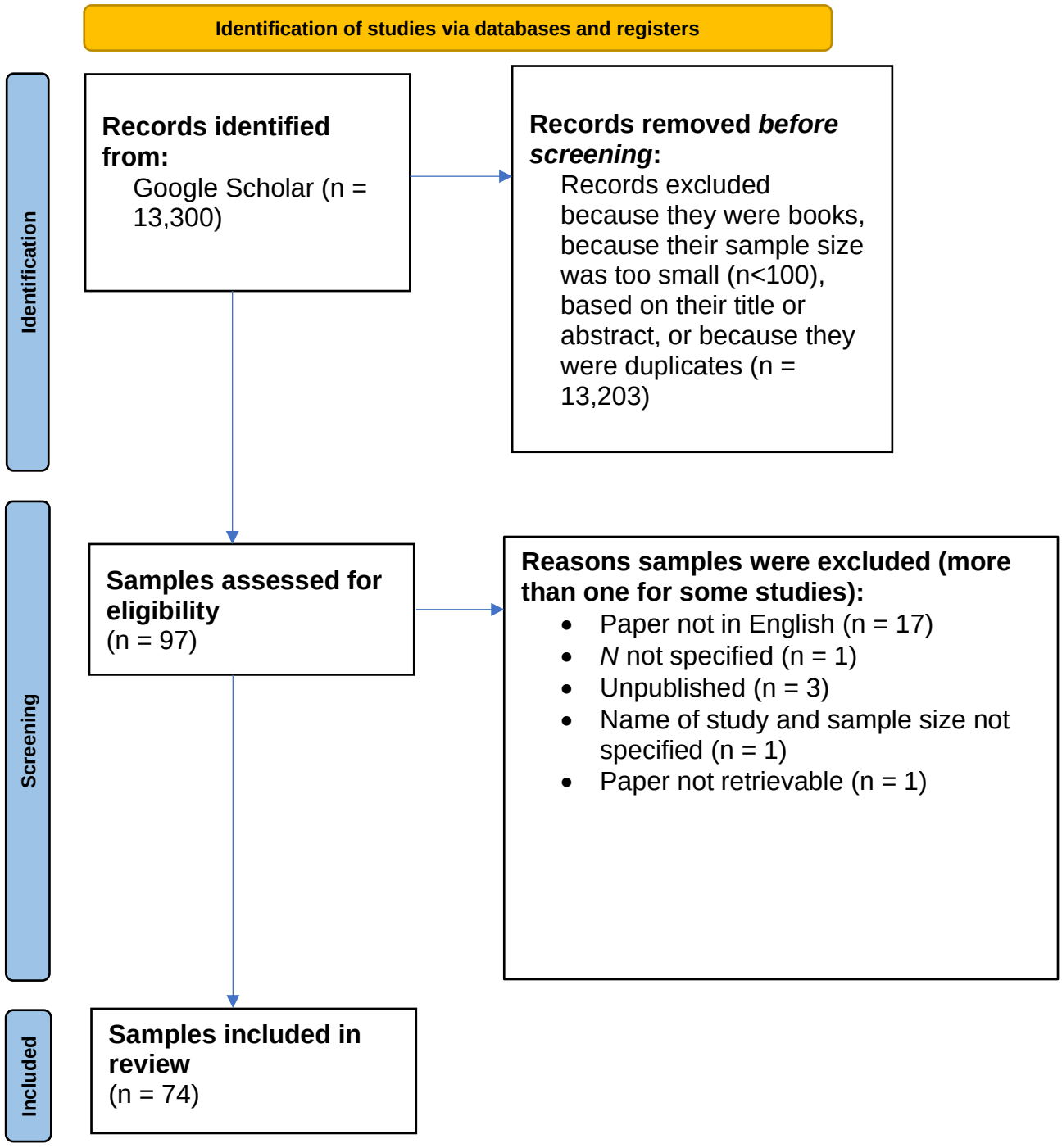
Screening
Samples assessed for eligibility
(n = 41)
Reasons samples were excluded (more than one for some studies):
• Partners were dating, not married (n = 1)
• Marriage status of participants was not clearly established (n = 1)
• Statistic not appropriate for this analysis (n = 3)
• Sample overlap (n = 5)
• Ascertainment (n = 1)
Included
Samples included in review
(n = 30)

Openness

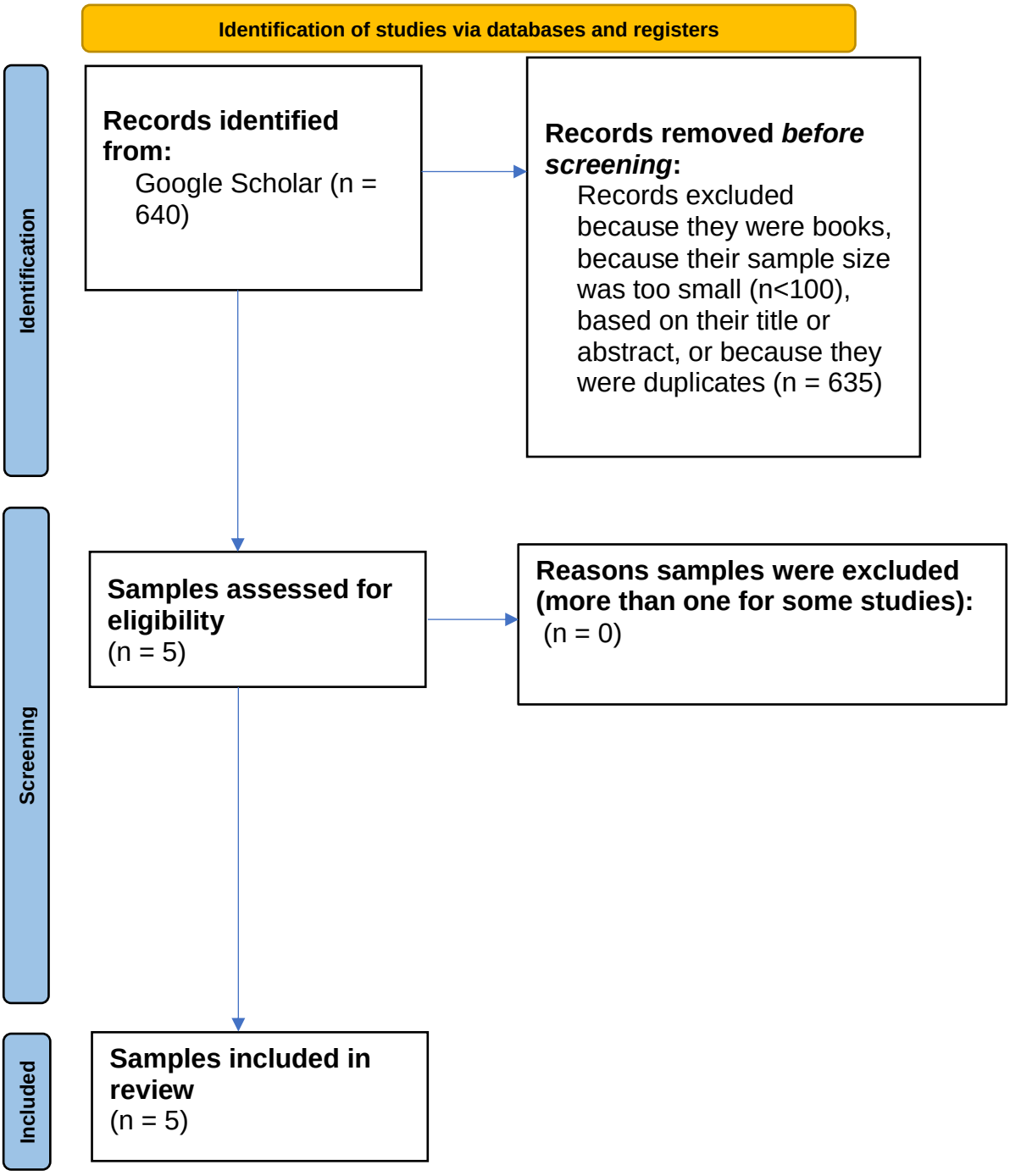

Identification of studies via databases and registers
Identification
Records identified from:
Google Scholar (n = 3,490)
Records removed *before screening*:
Records excluded because they were books, because their sample size was too small (n<100), based on their title or abstract, or because they were duplicates (n = 3,476)
Screening
Samples assessed for eligibility
(n = 14)
Reasons samples were excluded (more than one for some studies):
• Partners were dating, not married (n = 1)
• Marriage status of participants was not clearly established (n = 1)
• Statistic not appropriate for this analysis (n = 1)
Included
Samples included in review
(n = 11)


Body mass index
Identification of studies via databases and registers
Identification
Records identified from:
Google Scholar (n = 16,700)
Records removed *before screening*:
Records excluded because they were books, because their sample size was too small (n<100), based on their title or abstract, or because they were duplicates (n = 16,654)
Screening
Samples assessed for eligibility
(n = 46)
Reasons samples were excluded (more than one for some studies):
Ascertainment (n = 3)
Subgroup comprised of n<100 (n = 2)
Review or meta-analysis (n = 2)
Sample overlap (n = 2)
N not specified (n = 3)
Issues with phenotype (n = 4)
Included
Samples included in review
(n = 31)

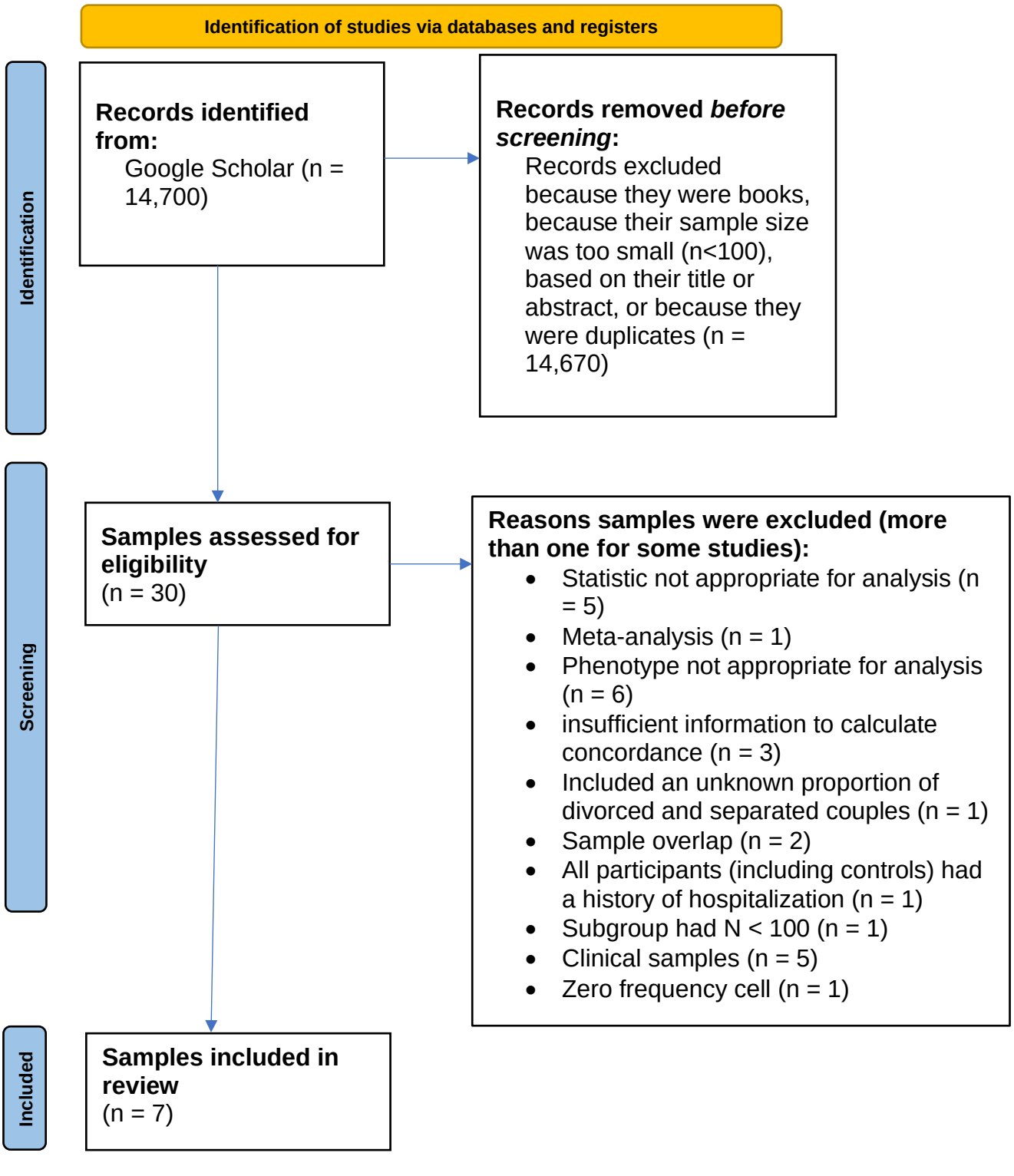
Height

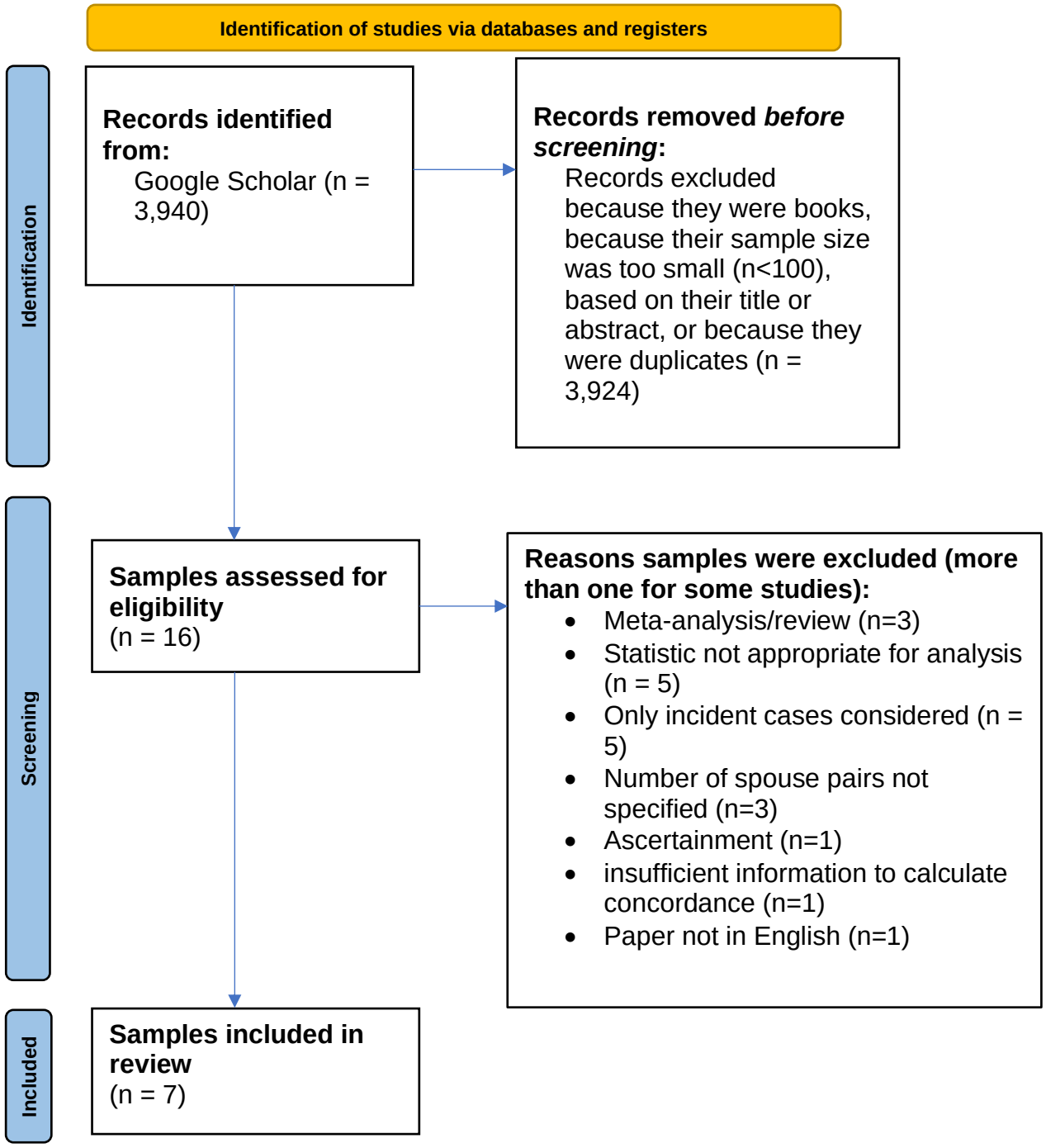

Identification of studies via databases and registers
Identification
Records identified from:
Google Scholar (n = 13,300)
Records removed *before screening*:
Records excluded because they were books, because their sample size was too small (n<100), based on their title or abstract, or because they were duplicates (n = 13,203)
Screening
Samples assessed for eligibility
(n = 97)
Reasons samples were excluded (more than one for some studies):
Paper not in English (n = 17)
N not specified (n = 1)
Unpublished (n = 3)
Name of study and sample size not specified (n = 1)
Paper not retrievable (n = 1)
Included
Samples included in review
(n = 74)

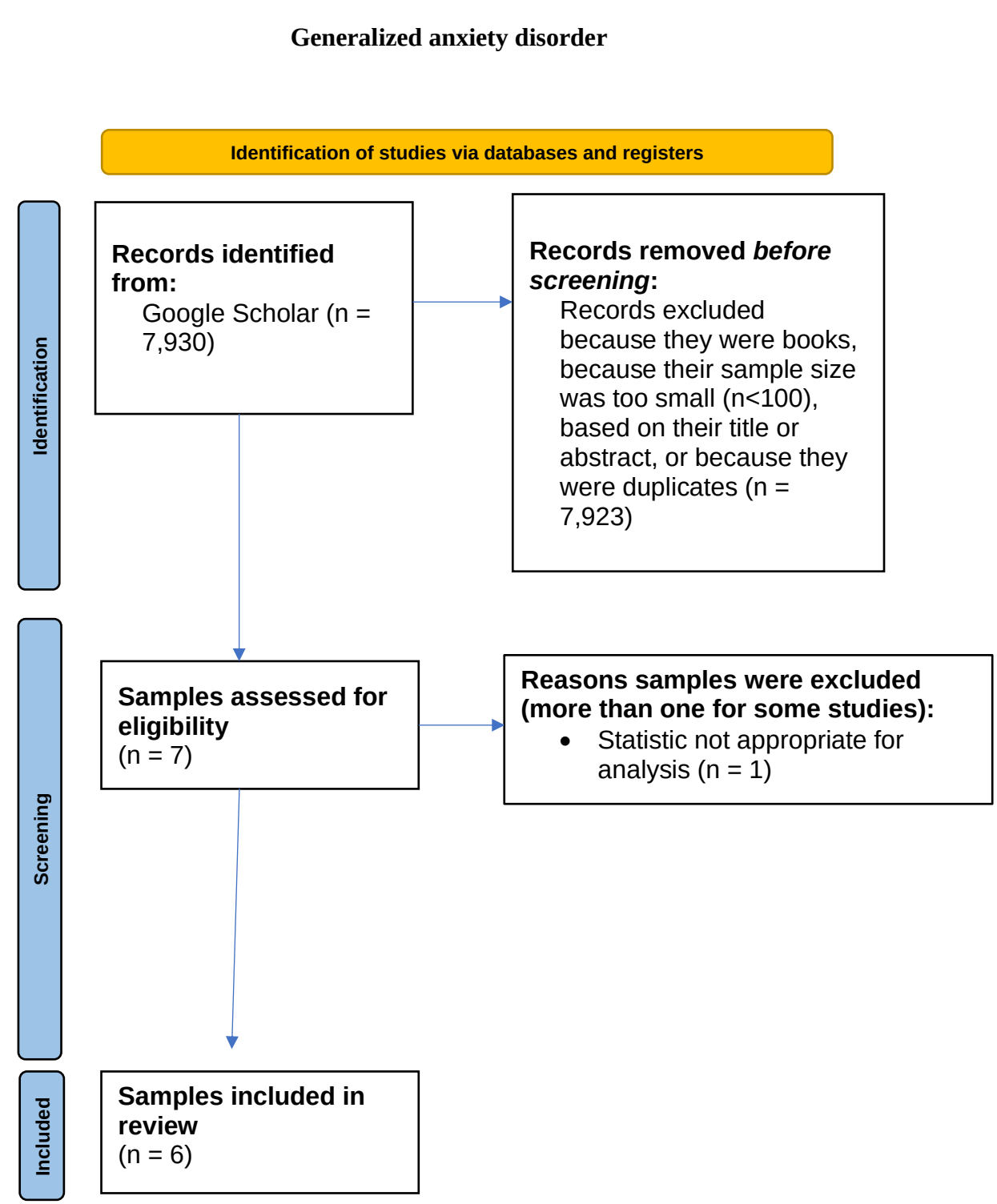
Waist-to-hip ratio



Depression


Identification of studies via databases and registers
Identification
Records identified from:
Google Scholar (n = 14,700)
Records removed *before screening*:
Records excluded because they were books, because their sample size was too small (n<100), based on their title or abstract, or because they were duplicates (n = 14,670)
Screening
Samples assessed for eligibility
(n = 30)
Reasons samples were excluded (more than one for some studies):
• Statistic not appropriate for analysis (n = 5)
• Meta-analysis (n = 1)
• Phenotype not appropriate for analysis (n = 6)
• insufficient information to calculate concordance (n = 3)
• Included an unknown proportion of divorced and separated couples (n = 1)
• Sample overlap (n = 2)
• All participants (including controls) had a history of hospitalization (n = 1)
• Subgroup had N < 100 (n = 1)
• Clinical samples (n = 5)
• Zero frequency cell (n = 1)
Included
Samples included in review
(n = 7)


Identification of studies via databases and registers
Identification
Records identified from:
Google Scholar (n = 3,940)
Records removed *before screening*:
Records excluded because they were books, because their sample size was too small (n<100), based on their title or abstract, or because they were duplicates (n = 3,924)
Screening
Samples assessed for eligibility
(n = 16)
Reasons samples were excluded (more than one for some studies):
Meta-analysis/review (n=3)
Statistic not appropriate for analysis (n = 5)
Only incident cases considered (n = 5)
Number of spouse pairs not specified (n=3)
Ascertainment (n=1)
insufficient information to calculate concordance (n=1)
Paper not in English (n=1)
Included
Samples included in review
(n = 7)



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ 2021;372:n71. doi: 10.1136/bmj.n71

For more information, visit: http://www.prisma-statement.org/

Supplementary Figure 5. Flow diagrams depicting the number of study results for each phenotype and the number of samples that were excluded for various reasons.

For forest plots that contain numbers instead of author names, the following authors refer to the corresponding number for each respective phenotype; asterisks listed next to the studies' authors indicate that the sample was predominantly made-up of a racial group that is not the majority demographic in the region from which it was sampled):

Educational attainment:

1 Watkins, M. P. & Meredith, W. (1981)
2 Cronkite, R. C. & Moos, R. H. (1984)
3-7 Heath, A. C. *et al.* (1985)
8,9 Jacobs, J. A. & Furstenberg Jr, F. F. (1986)
10,11 Procidano, M. E. & Rogler, L. H.* (1989)
12 Lykken, D. T. & Tellegen, A. (1993)
13 Feng, D. & Baker, L. (1994)
14 Botwin, M. D., Buss, D. M. & Shackelford, T. K. (1997)
15 Dufouil, C. & Alpérovitch, A. (2000)
16 Hur, Y.-M. (2003)
17 Luo, S. & Klohnen, E. C. (2005)
18 Peek, M. K., Stimpson, J. P., Townsend, A. L. & Markides, K. S.* (2006)
19,20 Chen, H., Luo, S., Yue, G., Xu, D. & Zhaoyang, R. (2009)
21,22 Alford, J. R., Hatemi, P. K., Hibbing, J. R., Martin, N. G. & Eaves, L. J. (2011)
23 Zietsch, B. P., Verweij, K. J., Heath, A. C. & Martin, N. G. (2011)
24 Verbakel, E. & Kalmijn, M. (2014)
25 George, D. *et al.* (2015)
26 Torvik, F. A., Gustavson, K., Røysamb, E. & Tambs, K. (2015)
27 Retnakaran, R. *et al.* (2021)

Intelligence quotient (IQ):

1 Cattell, R. B. & Willson, J. L. (1938)
2 Zonderman, A. B., Vandenberg, S. G., Spuhler, K. P. & Fain, P. R. (1977)
3 Phillips, K., Fulker, D. W., Carey, G. & Nagoshi, C. T. (1988)
4 Phillips, K., Fulker, D. W., Carey, G. & Nagoshi, C. T. (1988)*
5 Phillips, K., Fulker, D. W., Carey, G. & Nagoshi, C. T. (1988)
6,7 Mascie-Taylor, C. G. N. (1989)
8,9 Tambs, K., Sundet, J. M. & Berg, K. (1993)
10 Watson, D. *et al.* (2004)

Smoking cessation:

1 Venters, M. H., Jacobs Jr, D. R., Luepker, R. V., Maimaw, L. A. & Gillum, R. F. (1984)
2 Pyke, S. D., Wood, D.A., Kinmonth, A.L. & Thompson, S.G. (1997)
3 Jurj, A. L. *et al.* (2006)
4 Cobb, L. K. *et al.* (2014)

Smoking initiation:

1,2 Price, R. A. & Vandenberg, S. G. (1980)
3 Venters, M. H., Jacobs Jr, D. R., Luepker, R. V., Maimaw, L. A. & Gillum, R. F. (1984)

4 Boomsma, D. I., Koopmans, J. R., Van Doornen, L. J. & Orlebeke, J. F. (1994)
5 Pyke, S. D., Wood, D.A., Kinmonth, A.L. & Thompson, S.G. (1997)
6 Dufouil, C. & Alpérovitch, A. (2000)
7 Stimpson, J. P., Masel, M. C., Rudkin, L. & Peek, M. K.* (2006)
8 Jurj, A. L. *et al.* (2006)
9 Di Castelnuovo, A. *et al.* (2007)
10 Cobb, L. K. *et al.* (2014)
11,12 Maes, H. H. *et al.* (2018)

Smoking status:
1,2 Price, R. A. & Vandenberg, S. G. (1980)
3,4 Sutton, G. C. (1980)
5 Venters, M. H., Jacobs Jr, D. R., Luepker, R. V., Maimaw, L. A. & Gillum, R. F. (1984)
6 Boomsma, D. I., Koopmans, J. R., Van Doornen, L. J. & Orlebeke, J. F. (1994)
7 Pyke, S. D., Wood, D.A., Kinmonth, A.L. & Thompson, S.G. (1997)
8 Homish, G. G. & Leonard, K. E. (2005)
9 Stimpson, J. P., Masel, M. C., Rudkin, L. & Peek, M. K.* (2006)
10 Jurj, A. L. *et al.* (2006)
11 Pai, C.-W., Godboldo-Brooks, A. & Edington, D. W. (2010)
12 Ask, H., Rognmo, K., Torvik, F. A., Røysamb, E. & Tambs, K. (2012)
13 Jackson, S. E., Steptoe, A. & Wardle, J. (2015)
14 Machado, M. P. A. *et al.* (2017)
15 Jeong, S. & Cho, S.-I. (2018)

Body mass index:
1 Pennock-Román, M. (1984)
2,3 Longini Jr, I. M., Higgins, M. W., Hinton, P. C., Moll, P. P. & Keller, J. B. (1984)
4 Staessen, J. *et al.* (1985)
5 Bouchard, C., Perusse, L., Leblanc, C., Tremblay, A. & Theriault, G. (1988)
6 Friedlander, Y., Kark, J. D., Kaufmann, N. A., Berry, E. M. & Stein, Y. (1988)
7-9 Friedlander, Y., Kark, J. D., Kaufmann, N. A., Berry, E. M. & Stein, Y.* (1988)
10 Tambs, K. *et al.* (1991)
11 Moll, P. P., Burns, T. L. & Lauer, R. M. (1991)
12 Sanchez-Andres, A. & Mesa, M. (1994)
13 Rotimi, C. & Cooper, R. (1995)
14 Knuiman, M. W., Divitini, M. L., Bartholomew, H. C. & Welborn, T. A. (1996)
15 Pyke, S. D. (1997)
16 Dufouil, C. & Alpérovitch, A. (2000)
17 Katzmarzyk, P. T., Hebebrand, J. & Bouchard, C. (2002)
18 Jee, S. H., Suh, I., Won, S. Y. & Kim, M. Y. (2002)
19 Hur, Y.-M. (2003)
20 Wu, D.-M. *et al.* (2003)
21 Kim, H. C. *et al.* (2006)
22 Stimpson, J. P., Masel, M. C., Rudkin, L. & Peek, M. K.* (2006)
23 Di Castelnuovo, A. *et al.* (2007)
24 Zietsch, B. P., Verweij, K. J., Heath, A. C. & Martin, N. G. (2011)

25 George, D. *et al.* (2015)
26,27 Sebro, R., Peloso, G. M., Dupuis, J. & Risch, N. J. (2017)
28 Davillas, A. & Pudney, S. (2017)
29 Holway, G. V., Umberson, D. & Donnelly, R. (2018)
30 Rawlik, K., Canela-Xandri, O. & Tenesa, A. (2019)
31 Retnakaran, R. *et al.* (2021)

Height:
1 Pearson, K. & Lee, A. (1903)
2 Davenport, C.B. (1917)
3-6 Willoughby, R.R. (1933)
7 Pomerat, C.M. (1936)
8 Burgess, E.W. & Wallin, P. (1944)
9 Smith, M. (1946)
10 Harrison, G. A., Gibson, J. B. & Hiorns, R. W. (1976)
11 Hill, C. T., Rubin, Z. & Peplau, L. A. (1976)
12 Mueller, W. H. & Malina, R. M. (1976)
13 Mueller, W. H. & Malina, R. M.* (1976)
14 Susanne, C. (1977)
15 Roberts, D. F., Billewicz, W. Z. & McGregor, I. (1978)
16,17 Garn, S. M., Cole, P. E. & Bailey, S. M. (1979)
18 Nance, W. E., Corey, L. A. & Eaves, L. J. (1980)
19,20 Price, R. A. & Vandenberg, S. G. (1980)
21,22 Pieper, U. (1981)
23 Annest, J. L., Sing, C. F., Biron, P. & Mongeau, J. G. (1983)
24 McManus, I. C. & Mascie-Taylor, C. G. (1984)
25 Pennock-Román, M. (1984)
26,27 Siniarska, A. (1984)
28 Ahmad, M. & Gilbert, R. I. (1985)
29 Byard, P. J., Poosha, D. V. R. & Satyanarayana, M. (1985)
30 Province, M. A. & Rao, D. C. (1985)
31 Staessen, J. *et al.* (1985)
32 Mascie-Taylor, C. N. (1987)
33 Nagoshi, C. T. & Johnson, R. C.* (1987)
34 Nagoshi, C. T. & Johnson, R. C. (1987)
35 Byard, P. J., Mukherjee, B. N., Bhattacharya, S. K., Russell, J. M. & Rao, D. C. (1989)
36 Tambs, K. *et al.* (1992)
37 Sutton, G. C. (1993)

Height (continued):
1 Sanchez-Andres, A. & Mesa, M. S. (1994)
2 Dasgupta, I., Dasgupta, P. & Daschaudhuri, A. B. (1997)
3-5 Ginsburg, E., Livshits, G., Yakovenko, K. & Kobyliansky, E. (1998)
6 Luo, Z. C., Albertsson-Wikland, K. & Karlberg, J. (1998)
7 To, W. W. K., Cheung, W. & Kwok, J. S. Y. (1998)
8 Price *et al.* (2000)

9, 10 Price *et al.** (2000)
11 Price *et al.* (2000)
12 Dalmia, S. & Lawrence, P. G. (2001)
13 Al-Kandari, Y., Crews, D. E. & Poirier, F. E. (2002)
14 Eckman, R. E., Williams, R. & Nagoshi, C.* (2002)
15 Eckman, R. E., Williams, R. & Nagoshi, C. (2002)
16 Xu, J. *et al.* (2002)
17 Hur, Y.-M. (2003)
18 Mukhopadhyay, N. (2003)
19 Raychaudhuri, A., Ghosh, R., Vasulu, T. S. & Bharati, P. (2003)
20 Silventoinen, K., Kaprio, J., Lahelma, E., Viken, R. J. & Rose, R. J. (2003)
21 Salces, I., Rebato, E. & Susanne, C. (2004)
22 Heude, B. *et al.* (2005)
23 Knuiman, M. W., Divitini, M. L. & Bartholomew, H. C. (2005)
24 Ellis, J. A. *et al.* (2007)
25 Godoy, R. *et al.* (2008)
26 Sear, R. & Marlowe, F. W. (2009)
27 Ajala, O. *et al.* (2011)
28 Zietsch, B. P., Verweij, K. J., Heath, A. C. & Martin, N. G. (2011)
29 Seki, M., Ihara, Y. & Aoki, K. (2012)
30 Keller, M. C. *et al.* (2013)
31 Stulp, G., Buunk, A. P. & Pollet, T. V. (2013)
32 Stulp, G., Buunk, A. P., Pollet, T. V., Nettle, D. & Verhulst, S. (2013)
33 Uchida, K., Matsuo, N., Hori, N., Hasegawa, T. & Takahashi, T. (2013)
34 Stulp, G., Mills, M., Pollet, T. V. & Barrett, L. (2014)
35 Ponzo, M. & Scoppa, V. (2015)
36 Prichard, I. *et al.* (2015)
37 Tenesa, A., Rawlik, K., Navarro, P. & Canela-Xandri, O. (2015)

<u>Depression:</u>
1 McLeod, J. D. (1995)
2 Galbaud Du Fort, G., Bland, R. C., Newman, S. C. & Boothroyd, L. J. (1998)
3,4 Maes, H. H. *et al.* (1998)
5 Hippisley-Cox, J. (2002)
6,7 Nordsletten, A. E. *et al.* (2016)

<u>Diabetes:</u>
1 Hippisley-Cox, J. (2002)
2 Stimpson, J. P. & Peek, M. K.* (2005)
3 Jurj, A. L. *et al.* (2006)
4 Al-Sharbatti, S. S., Abed, Y. I., Al-Heety, L. M. & Basha, S. A. (2016)
5 Sun, J. *et al.* (2016)
6 Patel, S. A. *et al.* (2017)
7 Watanabe, T., Sugiyama, T., Takahashi, H., Noguchi, H. & Tamiya, N. (2020)

Supplementary Note

The following lists the phenotypes we meta-analyzed and citations corresponding to each study that was meta-analyzed for that phenotype, followed by descriptions of the more specific construct(s) that we measured for that phenotype. For the measure(s) that each study used for less standardized phenotypes, see Supplementary Tables S1 and S2:

Educational attainment[1–19]: Defined on an ordinal scale (e.g. range of years/schooling level completed), or by number of years of schooling. All ordinal measures of educational attainment with fewer than four points were excluded.

Intelligence quotient[20–25]: Any measure of general IQ.

Political attitudes[17,18,20,26–30]: We considered continuous measures of attitudes toward political issues instead of specific party affiliation/support.

Religiosity[18,20,26,30,31]: We considered continuous measures of religious ideals/practices, rather than specific religious affiliation or a single measure of religiosity (e.g. only reports of church attendance).

Alcohol use disorder[32–34]: This was measured as a dichotomous trait (described as alcohol abuse, alcohol dependence, or alcoholism).

Drinking quantity[1,2,35–38]: Amount of alcohol (e.g. milliliters, grams, ounces, or kilocalories) consumed per day or week**.**

Smoking cessation[39–42]: This was a dichotomous measure of whether subjects were former or current smokers among couples in which both spouses had a history of smoking. Because the phenotype was only examined in couples in which both partners had ever smoked, whenever "never smoked" was included as an option for participants, this cell was excluded from the

contingency table such that for this measure, the odds ratio reflected the odds of a spouse being a former smoker if their spouse was a former smoker divided by the odds of a spouse being a former smoker if their spouse was a current smoker.

Smoking initiation[1,35,38–45]: This was a dichotomous measure of whether participants had ever smoked tobacco. When options for participants included "former," "current," and "never," cells from those who responded "former" and "current" were combined in the contingency table such that for this measure, the odds ratio reflected the odds of a spouse having ever smoked (formerly *or* currently) if their spouse ever smoked (formerly *or* currently) divided by the odds of a spouse having ever smoked if their spouse never smoked.

Smoking quantity[11,46–48]: Number of cigarettes (or equivalent in tobacco) consumed per day (not restricted to those with smoking histories)**.**

Smoking status[38–41,43,45,48–54]: This was a dichotomous measure of whether participants currently smoked tobacco. When options for participants included "former," "current," and "never," cells from those who responded "former" and "never" were combined in the contingency table such that for this measure, the odds ratio reflected the odds of a spouse being a current smoker if their spouse was a current smoker divided by the odds of a spouse being a current smoker if their spouse did not currently smoke (never smoked *or* formerly smoked).

Substance use disorder[55,56]: This was measured as a dichotomous trait (described as substance dependence or substance abuse).

Agreeableness[13,20,57–60]: A "Big Five" personality trait characterized by an individual's level of kindness, sympathy, cooperativeness, warmth, politeness, etc.[61]. Scores for this trait were typically based on the degree to which participants agreed with statements pertaining to agreeableness or where they identified themselves on a set of spectra of bipolar adjectives

pertaining to agreeableness. Ratings were typically given on a 5-point or 7-point scale (see Supplementary Table S1 for the measure used in each study).

Conscientiousness[13,20,57–60]: A "Big Five" personality trait characterized by an individual's level of efficiency, organization, carefulness, tidiness, practicality, efficiency, organization, etc.[61]. Scores for this trait were typically based on the degree to which participants agreed with statements pertaining to conscientiousness or where they identified themselves on a set of spectra of bipolar adjectives pertaining to conscientiousness. Ratings were typically given on a 5-point or 7-point scale (see Supplementary Table S1 for the measure used in each study).

Extraversion[13,17,18,20–22,26,31,38,47,57–60,62–68]: A "Big Five" personality trait characterized by an individual's level of energy, talkativeness, outgoingness, etc.[61]. Scores for this trait were typically based on the degree to which participants agreed with statements pertaining to extraversion or where they identified themselves on a set of spectra of bipolar adjectives pertaining to extraversion. Ratings were typically given on a 5-point or 7-point scale (see Supplementary Table S1 for the measure used in each study).

Neuroticism[11,13,17,18,20,22,31,38,47,57–60,62,64–70] (otherwise characterized by its diametric opposite, emotional stability[71]): A "Big Five" personality trait characterized by an individual's level of enviousness, jealousy, security, anxiety, moodiness, emotionality, etc.[61]. Scores for this trait were typically based on the degree to which participants agreed with statements pertaining to neuroticism or where they identified themselves on a set of spectra of bipolar adjectives pertaining to neuroticism. Ratings were typically given on a 5-point or 7-point scale (see Supplementary Table S1 for the measure used in each study).

Openness[13,20,57–59,70] (otherwise characterized as Intellect or Openness): A "Big Five" personality trait characterized by an individual's level of creativeness, intelligence, imagination,

etc.[61]. Scores for this trait were typically based on the degree to which participants agreed with statements pertaining to openness or where they identified themselves on a set of spectra of bipolar adjectives pertaining to openness. Ratings were typically given on a 5-point or 7-point scale (see Supplementary Table S1 for the measure used in each study).

Body mass index[1,4,6,17,19,35,39,43,72–89]: Kilograms/meters^2 or any proportionally equivalent measure of weight-to-body mass.

Height[4,17,36,38,77,78,90–142]: We re-analyzed 74 of the samples from a single meta-analysis[143] using random effects (see main text).

Waist-to-hip ratio[35,73,75,76,80].

Depression[32,33,55,144,145]: This was measured as a dichotomous trait.

Diabetes[40,144,146–150]: This was measured as a dichotomous trait. We only included studies that examined prevalent diabetes, excluding studies that only measured incident diabetes and therefore excluded prevalent cases at baseline. One study[148] reported concordance for type 2 diabetes, but we included it because 90-95% of people with diabetes have type 2[151]**.**

Generalized anxiety disorder[32,33,55,145]: This was measured as a dichotomous trait.

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