

Subject Index

A

agoraphobia 252
alcohol consumption 92
ANOVA 4, 64
 F Test 4, 9, 19
 approximate *F* test 7, 18f.
antidepressive therapy 208
apples-and-oranges problem 149

B

Begg and Mazumdar test 75f.
Behrens-Fisher problem 4
between-study variance 58, 64, 87,
 see heterogeneity
bias in meta-analysis 72, 75
 graphical methods 72ff.
 statistical tests 75ff.
body-mass-index (BMI) 91
breast cancer 91, 93
Brown-Forsythe test 6, 16
 modified 6, 17, 19

C

causal explanation 121
central venous catheter 187
chemotherapy 93, 199, 202
clinical trials 109, 120, 126, 208
 guidelines 101ff.
 phase III 110, 118
 randomized .. 72, 80, 100, 104, 108
Cochran's test 5, 15
comparability of studies 90, 217
computer packages 159
 C.A.MAN 161
 META 159, 163, 252ff.
confidence interval plot 159, 252f.
correlation *see* effect size
count data 156, 180, 187, 193
Cox regression 42, 44, 50
critical multiplism 135

D

depression 208

DerSimonian-Laird estimator 45ff., 58,
 87, 184, 254
design variables *see* explanatory
 variables
distribution
 binomial 160, 184, 255
 χ^2 27, 160
 poisson 185
dyspepsia 108

E

effect size 142, 183, 252
 (log) odds ratio ... 181f., 185, 188f.,
 192
 (log) relative risk 42, 44, 50, 55, 72,
 92, 181f.
 correlation 22
 number needed to treat 181
 response rate difference 210
 risk difference 181
 standard error of .. 26, 73, 183, 235,
 238
 standardized difference ... 22, 42f.,
 47, 49, 55, 75, 142
 standardized mortality ratio 42f.,
 47, 50
 transformation of 25f.
 variance explained 237
efficiency 156, 181
Egger test 76f.
EM-algorithm 161, 186, 255
enzyme-linked immunosorbent assays
 (ELISAs) 167, 169, 171ff.
epidemiology 180, 208, 252
expectancy-value model 222, 226f.,
 234f., 240f.
explanatory variables ... 134, 145, 169,
 172, 175, 187, 192, 199f., 208, 210,
 228

F

falsificationism 116

- FDA 117, 126f.
file-drawer hypothesis 230, 242
Fisher's z 26
fixed effects 118, 169
 confidence interval for MES 55
 deficiency of tests 59ff.
 mean effect size (MES) 49, 55
 model .. 27, 54ff., 87, 109, 131, 238,
 see models
forest plot 72, 86
funnel plot 73, 86, 211f., 252
- G**
Galbraith plot 74, 86
garbage in – garbage out problem 149
generalizability theory 123
generalization 144
 Cook's principles 125ff.
 applied to meta-analysis .. 129ff.
 causal explanation 127, 133f.
 discriminant validity 126f., 130ff.
 empir. inter- and extrapolation
 127f., 132f.
 heterog. irrelevancies 125f., 130,
 135
 proximal similarity ... 125, 129f.
 domains 119f.
 empirical 116, 119ff.
 logical 116
 meaning of 115ff.
 theoretical 116
 transfer 117
 universals 116
generalized linear model 185, 199
 binomial model 185, 187
 ML-estimation 186
 poisson model 185, 187
- H**
heterogeneity .. 36, 83, 86, 91, 105, 160,
199, 252
 baseline 182, 184, 189f.
 detection of 86, 108, 160, *see*
 homogeneity
 distribution 43
 modeling of .. 161ff., 192, 205, 252,
 254ff.
heterogeneity variance 42, 56, 188, 192,
254
 estimation of 42ff., 58, 61, 184, 200,
 254
 nonparametric estimator 50
Hodgkin's disease 198
homogeneity 36, 43, 252
 modeling of 254
 test of 25f., 30, 35, 37,
 54f., 57, 108, 160, 169, 171, 184,
 192, 201, 210, 240, 254
hygiene in hospitals 180
- I**
inclusion/exclusion criteria 88, 90
independence assumption 174
inference
 deductive 115
 inductive 115
integrative reviews 135
intention to treat analysis 108
ischaemic heart disease 191
iterative reweighting 200
- K**
Kaplan-Meier estimator 50
- L**
language bias 72
- M**
maximum likelihood
 nonparametric approach 161, 186,
 189, 192
maximum partial likelihood estimator
(MPLE) 44, 47f.
mean effect size (MES) 25, 31, 72, 86f.,
180, 183ff., 188f., 239, 254
 bias of 28
 confidence interval 26, 28, 32f., 184
 significance of 26, 34, 183f.
 variance of 25, 183
Mehrotra test *see* modified
 Brown-Forsythe test
meta-analysis
 and theory development 146f.
 approaches 23, 142
 classification of 27
 Hedges-Olkin 24f.
 Hunter-Schmidt 24f., 142
 Rosenthal-Rubin 24f.
 bias *see* bias in meta-analysis
 conducting 107
 critique of 80, 100, 149f.
 generalizability of inferences .. 129

- increasing credibility of 104ff.
 objectives 104ff.
 of diagnostic tests 166
 of literature (MAL) 80f., 83
 of patient data (MAP) ... 80f., 83f.,
 107
 planning of 106f.
 presentation of results 107ff.
 prospective 81, 84, 91, 102f.
 reasons for 82
 recommendations for use of .. 103
 steps 85
 meta-regression 88, 238
 mixed logistic regression 169, 172, 175,
 189, 191
 mixing distribution 161, 256
 mixture distribution 161
 analysis 156, 187, 189f., 254f.
 models
 choice between fixed and random
 effects 63, 238
 combined decision rules 63f.
 comparison between fixed and ran-
 dom effects 87f.
 mixture 256
 moderator
 analysis 142f., 172ff., 225
 effects 126f., 131, 134, 144
 example 143
 mono-operation bias 130
 multicenter studies .. 81, 84, 105, 201f.,
 211
 multivariate models 175
- N**
- narrative review 81, 83, 220
 Nelson estimator 51
 nonparametric MLE *see* maximum
 likelihood
- O**
- odds ratio *see* effect size
 orthogonal contrast 210
 overall treatment effect 54, 103, *see*
 mean effect size (MES)
 overdispersion 175
- P**
- pharmaceutical
 production 43, 156
 products 117
- pivotal trials 100, 105, 107, 109, 111
 placebo 108, 214
 response 131f., 215
 run-in 211, 216
 pooled estimate ... *see* mean effect size
 (MES)
 posterior distribution 162
 principle of compatibility 228ff.
 program evaluation 123
 psychotherapy 126, 129ff.
 publication bias 72, 83, 86, 88, 104, 211
- Q**
- quality assurance 156
 heterogeneity in 156
 meta-analytical modeling in .. 158
 mixture distribution analysis in 156
 quality control 156, 159
 quality scores 42, 44, 48, 52
 quasi-experiments 80, 116, 208
- R**
- radial plot 74, 86
 random effects 36, 118, 169, 192
 conditional 36, 131
 confidence interval for MES 57
 deficiency of tests 59ff.
 mean effect size (MES) 56
 model 27,
 43, 54, 56f., 87, 131, 142, 183f.,
 188f., 238, 252, *see* models
 model assumptions 44
 receiver operating characteristic ... 166
 regulatory setting ... 101, 104, 107, 111
 relative risk *see* effect size
 repeated measurements 168
 replication 110, 118
 representative designs 119
 risk estimation 90f.
 robustness of effects 118, 135
- S**
- sampling theory 121f.
 second order sampling error 28
 secondary analysis 233ff.
 self-reference effect 143
 sensitivity 169ff.
 sensitivity analysis 88, 103, 105
 software *see* computer packages
 specificity 169ff.
 standardized difference *see* effect size

standardized mortality ratio *see* effect size
study characteristics *.. see* explanatory variables
subgroup analysis 107, 110
survival rates 199, 203

T

technology transfer 117f.
tests
 of association 54
theory of planned behavior 223
theory of reasoned action 220ff.
treatment cells 209
Trichinellosis 167
Type I error rate 30, 35, 54, 66, 134

V

validation studies 166
validity
 construct 125
 external 122ff.
 internal 122, 124
variance decomposition 44f.

W

Welch test 5, 14, 19
 adjusted 7, 18
within-study variance 58, 65