

Data supplement DS1

Detailed search strategy: Search terms by database

Components	Keywords	
	Inclusion keywords	Exclusion keywords
Population	Humans	Animals
Outcome	Suicide Suicidal behavior Suicide ideation Suicide plan Suicide attempt Non-suicidal self-injury Parasuicide Self-injure Deliberate self-harm Suicidality Non-fatal suicidal behavior	
Exposure	Risk factor Causality Relationship Association Prediction Harm Adverse Antecedent History Etiology Protective factor Prevention Improvement Prevalence Incidence	
Study design	Experimental study Randomized controlled trial Controlled clinical trial Clinical trial Longitudinal study Observational study Cohort study Case control study Time series study Prospective study Retrospective study Follow-up Cross-sectional study	Case series Case report
Others		Type of publications: - Comments - Letter - Editorial

Search Strategy in each selected database:

1. Medline (Pubmed): Searched October 27, 2013

	Search Strategy
#24	(#20 AND #21 AND #22) NOT (#18 OR #19 OR #20)
#23	(#14 OR #15 OR #16 OR #17)
#22	(#10 OR #11 OR #12 OR #13)
#21	(#5 OR #6 OR #7 OR #8 OR #9)
#20	(#3 OR #4)
#19	(#1 NOT (#1 AND #2))
#18	case reports[Publication Type]
#17	((("prospective studies"[MeSH Terms] OR ("prospective"[All Fields] AND "studies"[All Fields]) OR "prospective studies"[All Fields] OR ("prospective"[All Fields] AND "study"[All Fields]) OR "prospective study"[All Fields]) OR ("retrospective studies"[MeSH Terms] OR ("retrospective"[All Fields] AND "studies"[All Fields]) OR "retrospective studies"[All Fields] OR ("retrospective"[All Fields] AND "study"[All Fields]) OR "retrospective study"[All Fields]) OR Follow-up[All Fields] OR ("cross-sectional studies"[MeSH Terms] OR ("cross-sectional"[All Fields] AND "studies"[All Fields]) OR "cross-sectional studies"[All Fields] OR ("cross"[All Fields] AND "sectional"[All Fields] AND "study"[All Fields]) OR "cross sectional study"[All Fields]))
#16	((("cohort studies"[MeSH Terms] OR ("cohort"[All Fields] AND "studies"[All Fields]) OR "cohort studies"[All Fields] OR ("cohort"[All Fields] AND "study"[All Fields]) OR "cohort study"[All Fields]) OR ("case-control studies"[MeSH Terms] OR ("case-control"[All Fields] AND "studies"[All Fields]) OR "case-control studies"[All Fields] OR ("case"[All Fields] AND "control"[All Fields] AND "study"[All Fields]) OR "case control study"[All Fields]) OR (("time"[MeSH Terms] OR "time"[All Fields]) AND series[All Fields] AND ("clinical trials as topic"[MeSH Terms] OR ("clinical"[All Fields] AND "trials"[All Fields] AND "topic"[All Fields]) OR "clinical trials as topic"[All Fields] OR "study"[All Fields] OR "biomedical research"[MeSH Terms] OR ("biomedical"[All Fields] AND "research"[All Fields]) OR "biomedical research"[All Fields]))))
#15	((("controlled clinical trial"[Publication Type] OR "controlled clinical trials as topic"[MeSH Terms] OR "controlled clinical trial"[All Fields]) OR ("clinical trial"[Publication Type] OR "clinical trials as topic"[MeSH Terms] OR "clinical trial"[All Fields]) OR ("longitudinal studies"[MeSH Terms] OR ("longitudinal"[All Fields] AND "studies"[All Fields]) OR "longitudinal studies"[All Fields] OR ("longitudinal"[All Fields] AND "study"[All Fields]) OR "longitudinal study"[All Fields]) OR (Observational[All Fields] AND ("clinical trials as topic"[MeSH Terms] OR ("clinical"[All Fields] AND "trials"[All Fields] AND "topic"[All Fields]) OR "clinical trials as topic"[All Fields] OR "study"[All Fields] OR "biomedical research"[MeSH Terms] OR ("biomedical"[All Fields] AND "research"[All Fields]) OR "biomedical research"[All Fields]))
#14	((Experimental[All Fields] AND ("clinical trials as topic"[MeSH Terms] OR ("clinical"[All Fields] AND "trials"[All Fields] AND "topic"[All Fields]) OR "clinical trials as topic"[All Fields] OR "study"[All Fields] OR "biomedical research"[MeSH Terms] OR ("biomedical"[All Fields] AND "research"[All Fields]) OR "biomedical research"[All Fields])) OR ("randomized controlled trial"[Publication Type] OR "randomized controlled trials as topic"[MeSH Terms] OR "randomized controlled trial"[All Fields] OR "randomised controlled trial"[All Fields]))

#13	((("risk factors"[MeSH Terms] OR ("risk"[Tiab] AND "factors"[Tiab]) OR "risk factors"[Tiab] OR ("risk"[Tiab] AND "factor"[Tiab]) OR "risk factor"[Tiab]))
#12	((("etiology"[Subheading] OR "etiology"[Tiab] OR "causality"[Tiab] OR "causality"[MeSH Terms]) OR Relationship[Tiab] OR ("association"[MeSH Terms] OR "association"[Tiab]) OR Prediction[Tiab] OR Harm[Tiab] OR Adverse[Tiab] OR Antecedent[Tiab] OR ("history"[Subheading] OR "history"[Tiab] OR "history"[MeSH Terms]))
#11	((("protective factors"[Tiab] OR ("protective"[Tiab] AND "factor"[Tiab]) OR ("protective"[Tiab] AND "factors"[Tiab]) OR "prevention"[Tiab]) OR Improvement[Tiab])
#10	(prevalence[MeSH Terms] OR incidence[MeSH Terms] OR prevalence[Tiab] OR incidence[Tiab])
#9	((("deliberate"[All Fields] AND "self"[All Fields] AND "harm"[All Fields]) OR "deliberate self-harm"[All Fields])
#8	((Non-suicidal[All Fields] AND self-injury[All Fields]) OR ("self-injurious behavior"[MeSH Terms] OR ("self-injurious"[All Fields] AND "behavior"[All Fields]) OR "self-injurious behavior"[All Fields] OR "parasuicide"[All Fields]) OR Self-injure[All Fields] OR ("self-injurious behavior"[MeSH Terms] OR ("self-injurious"[All Fields] AND "behavior"[All Fields]) OR "self-injurious behavior"[All Fields]))
#7	("suicide, attempted"[MeSH Terms] OR ("suicide"[All Fields] AND "attempted"[All Fields]) OR "attempted suicide"[All Fields] OR ("suicide"[All Fields] AND "attempt"[All Fields]) OR "suicide attempt"[All Fields])
#6	((suicidal[All Fields] AND ("behaviour"[All Fields] OR "behavior"[MeSH Terms] OR "behavior"[All Fields])) OR (("suicide"[MeSH Terms] OR "suicide"[All Fields]) AND (ideation[All Fields] OR plan[All Fields])))
#5	(suicid*) OR "suicide"[MeSH Terms] OR "suicide"[All Fields])
#4	editorial [Publication Type]
#3	letter[Publication Type]
#2	human[MeSH Terms]
#1	animal[MeSH Terms]

2. Embase: Searched October 21, 2013

	Search Strategy
#6	(#3 AND #4 AND #5) NOT (#1 OR #2)
#5	'experimental study'/exp OR 'experimental study' OR 'randomized controlled trial'/exp OR 'randomized controlled trial' OR 'controlled clinical trial'/exp OR 'controlled clinical trial' OR 'clinical trial'/exp OR 'clinical trial' OR 'longitudinal study'/exp OR 'longitudinal study' OR 'observational study'/exp OR 'observational study' OR 'cohort analysis'/exp OR 'cohort analysis' OR 'case control study'/exp OR 'case control study' OR 'prospective study'/exp OR 'prospective study' OR 'retrospective study'/exp OR 'retrospective study' OR 'follow-up'/exp OR 'follow-up' OR 'cross-sectional study'/exp OR 'cross-sectional study' OR 'cohort study'/exp OR 'cohort study' OR 'time series study'
#4	'risk factor'/exp OR 'risk factor':ti,ab OR 'prediction'/exp OR 'prediction':ti,ab OR 'association'/exp OR 'association':ti,ab OR 'prevention'/exp OR 'prevention':ti,ab OR 'causality'/exp OR 'causality':ti,ab OR 'relationship':ti,ab OR 'adverse':ti,ab OR 'antecedent':ti,ab OR 'etiology'/exp OR 'etiology':ti,ab OR 'protective factor':ti,ab OR prevalence/exp OR incidence/exp
#3	suicid* OR 'suicidal behavior'/exp OR 'suicidal behavior' OR 'automutilation'/exp OR 'automutilation' OR 'suicide'/exp OR 'suicide' OR 'suicide ideation'/exp OR 'suicide ideation' OR 'suicide plan' OR 'suicide attempt'/exp OR 'suicide attempt' OR 'non-suicidal self-injury' OR 'parasuicide'/exp OR 'parasuicide' OR 'self-injure' OR 'deliberate self-harm' OR suicidality
#2	letter/exp OR editorial/exp OR "case report"/exp
#1	animal/exp NOT (animal/exp AND human/exp)

3 Web of Science: Search October 21, 2013

	Search Strategy
#6	(#3 AND #4 AND #5) NOT (#1 OR #2)
#5	TS=(Experimental study OR Randomized controlled trial OR Controlled clinical trial OR Clinical trial OR Longitudinal study OR Observational study OR Cohort study OR Case control study OR Time series study OR Prospective study OR Retrospective study OR Follow-up OR Cross-sectional study)
#4	TS=(Risk factor OR Causality OR Relationship OR Association OR Prediction OR Harm OR Adverse OR Antecedent OR History OR Etiology OR Protective factor OR Prevention OR Improvement OR prevalence OR incidence)
#3	TS=(Suicid* OR suicide OR Suicidal behavior OR Suicide ideation OR Suicide plan OR Suicide attempt OR Non-suicidal self-injury OR Parasuicide OR Self-injure OR Deliberate self-harm OR Suicidality OR Non-fatal suicidal behaviour)
#2	DT=(letter) OR TI=(editorial) OR TI=(case report)
#1	TS=(animal NOT (animal AND human))

4. The Cochrane Library: Search October 17, 2013

	Search Strategy
#39	(#14 and #29 and #37) not (#3 or #38)
#38	MeSH descriptor: [Case Reports] explode all trees
#37	#30 or #31 or #32 or #33 or #34 or #35 or #36
#36	MeSH descriptor: [Cross-Sectional Studies] explode all trees
#35	MeSH descriptor: [Case-Control Studies] explode all trees
#34	MeSH descriptor: [Cohort Studies] explode all trees
#33	MeSH descriptor: [Longitudinal Studies] explode all trees
#32	MeSH descriptor: [Randomized Controlled Trials as Topic] explode all trees
#31	MeSH descriptor: [Randomized Controlled Trial] explode all trees
#30	MeSH descriptor: [Research Design] explode all trees
#29	#15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28
#28	improvement:ti,ab,kw
#27	prevention:ti,ab,kw
#26	protective factor*:ti,ab,kw
#25	etiology:ti,ab,kw
#24	history:ti,ab,kw
#23	antecedent:ti,ab,kw
#22	adverse:ti,ab,kw
#21	harm:ti,ab,kw
#20	prediction:ti,ab,kw
#19	association:ti,ab,kw
#18	relationship:ti,ab,kw
#17	MeSH descriptor: [Causality] explode all trees
#16	risk factor*:ti,ab,kw
#15	MeSH descriptor: [Risk] explode all trees
#14	#2 or #3 or #4 or #5 or #6 or #7 #8 or #9 or #10 or #11
#13	Deliberat* self-harm
#12	self-injur*
#11	Parasuicide
#10	Non-suicid* self-injury
#9	suicid* attempt*
#8	suicid* plan
#7	suicid* ideation
#6	suicid* behavi*
#5	suicid*
#4	MeSH descriptor: [Suicide] explode all trees
#3	#2 not (#2 and #1)
#2	MeSH descriptor: [Animals] explode all trees
#1	MeSH descriptor: [Humans] explode all trees

5. PsycInfo (EBSCOHost): Search October 22, 2013

	Search Strategy
#1	((DE "suicidal ideation" OR Suicidal Ideation OR DE "Suicide+" OR DE "Assisted Suicide" OR (DE "suicidology") OR suicid* OR (suicidal AND behav*) OR "suicidal ideation" OR "suicide plan" OR "suicide attempt" OR "attempted suicide" OR suicidality OR "suicide prevention" OR parasuicide OR "self-injurious behavior" OR "non-suicidal self-injury" OR self-injur* OR "non-fatal suicidal behavior" OR "non-fatal suicidal behaviour" OR (DE "Suicide Prevention")) AND (DE "risk factors" OR "risk factors" OR DE "causality" OR (TI causalit* OR AB causalit*) OR (TI relationship OR AB relationship) OR (TI Association* OR AB Association*) OR DE "Prediction" OR DE "Harm Reduction" OR (TI adverse OR AB adverse) OR (TI History OR AB History) OR DE "Etiology" OR (DE "Protective Factors") OR (TI "Protective factors" OR AB "Protective factors") OR (DE "Prevention") OR (DE "Accident Prevention") OR prevalence OR incidence OR (DE "Primary Mental Health Prevention") OR (DE "Relapse Prevention") OR (TI improve* OR AB improve*)) AND (DE "Clinical Trials+" OR DE "Experimental Design" OR DE "Between Groups Design" OR DE "Clinical Trials" OR DE "Cohort Analysis" OR DE "Followup Studies" OR DE "Hypothesis Testing" OR DE "Longitudinal Studies" OR DE "Repeated Measures" OR DE "Prospective Studies" OR DE "Case-control" OR DE "Cross-sectional" OR DE "Time Series" OR DE "Retrospective Studies")) NOT ((DE "Animals+" OR DE "Female Animals" OR DE "Infants (Animal)" OR DE "Invertebrates" OR DE "Male Animals" OR DE "Vertebrates") OR (DE "Case report"))

6. OpenGrey: Searched July 1, 2014 (Limit publication date: October 27, 2013)

	Search Strategy
#1	((suicide* OR (suicide* (behaviour OR behaviour)) OR (suicide* attempt*) OR (deliberate self-harm) OR (suicidality) OR self-injur*) AND (risk factor* OR causalit* OR relationship* OR association* OR prediction* OR harm* OR adverse OR antecedent* OR history OR etiology OR protective factor* OR prevention* OR improvement* OR incidence) AND (longitudinal study OR observational study OR cohort study OR ((case AND control) study) OR prospective study OR retrospective study OR "follow-up") AND (young* OR youth OR child* OR adolescent* OR (college student*) OR (university student*) OR (young worker*)))

Table DS1 Population attributable risk

Prevalence of LBG (%)	P₀ (%)	RR	PAR (%)
4	4	2.15	4.4
8	4	2.15	8.4
13	4	2.15	13

Prevalence of being LGB was calculated based on data from studies reporting this.^{18-23,31}

P₀: prevalence of suicide attempts in heterosexuals.

RR: relative risk.

PAR: population attributable risk.

Table DS2 Risk factors for suicide attempts in LGB adolescents and young adults

Author	Percentage of suicide attempts	Risk factor	Suicide attempts % / M (SD)	
			Yes	No (n=300)
D'Augelli A et al. 2005	16.9	Ever called sissy/tomboy	72	60
		Parents called youth sissy/tomboy	59	27
		Parents discouraged gender-atypical behaviour	69	30
		Parents called youth LGB	55	35
		History of family suicidality	38	23
		History of family depression	10	6
		Family socioeconomic status	3.16 (1.36)	2.99 (1.37)
		Age of first awareness of same-sex attractions	8.66 (2.53)	10.07 (3.44)
		Age of self-identification as LGB	12.59 (2.43)	13.92 (2.39)
		Age of first disclosure of sexual orientation	13.41 (2.18)	14.34 (2.02)
		Openness with family members about sexual orientation	3.97 (0.98)	3.01 (1.53)
		Age of disclosure of sexual orientation to a parent	13.57 (2.79)	14.89 (2.24)
		Years of awareness of sexual orientation	8.45 (2.32)	6.92 (3.63)
		Years between self-identification and first disclosure	1.00 (1.63)	.90 (1.67)
		Openness about sexual orientation with friends	4.28 (1.28)	4.15 (1.16)
		Openness about sexual orientation in junior high school	0.55 (1.12)	0.72 (1.24)
		Childhood gender atypicality	3.68 (1.39)	2.94 (1.43)
		Parental psychological abuse	1.78 (0.85)	1.09 (0.69)
		Gay-related verbal abuse	8.03 (6.67)	4.51 (4.80)
Silenzio V et al. 2007	4.5 ^a		OR (95%CI)	
		Problem drinking	1.97 (0.42-9.12)	
		Problem drug use	1.78 (0.46-6.91)	
		Depression	1.11 (0.99-1.25)	
Mustanski B et al. 2013	5.5	Past suicide attempt	10.52 (2.00-55.27)	

		Depression	0.98 (0.84-1.14)
		Hopelessness	1.82 (0.79-4.19)
Burns M et al. 2015	14	Black	1.29 (0.58-2.87)
		Latino	1.44 (0.57-3.59)
		Other	3.02 (1.10-8.25)

^a Percentage from the total LGBs in the sample (Table 1).

Bold letters show higher prevalence or media values, and significant odd ratios.

FIGURE LEGENDS

Fig. DS1 Forest plot (a), Galbraith plot (b) and Funnel plot (c) of sexual orientation as risk factor for suicide attempts, comparing gay and bisexual against heterosexual men

Fig. DS2 Forest plot (a), Galbraith plot (b) and Funnel plot (c) of sexual orientation as risk factor for suicide attempts, comparing lesbian and bisexual against heterosexual women

Fig. DS3 Forest plots of sexual orientation as risk factor for suicide attempts, comparing a) gay versus heterosexual men, b) bisexual versus heterosexual men, c) lesbian versus heterosexual women, and d) bisexual versus heterosexual women

Fig. DS4 Forest plot (a), Galbraith plot (b) and Funnel plot (c) of depression as risk factor for suicide attempts in lesbian, gay and bisexual adolescents and youths

Fig. DS1

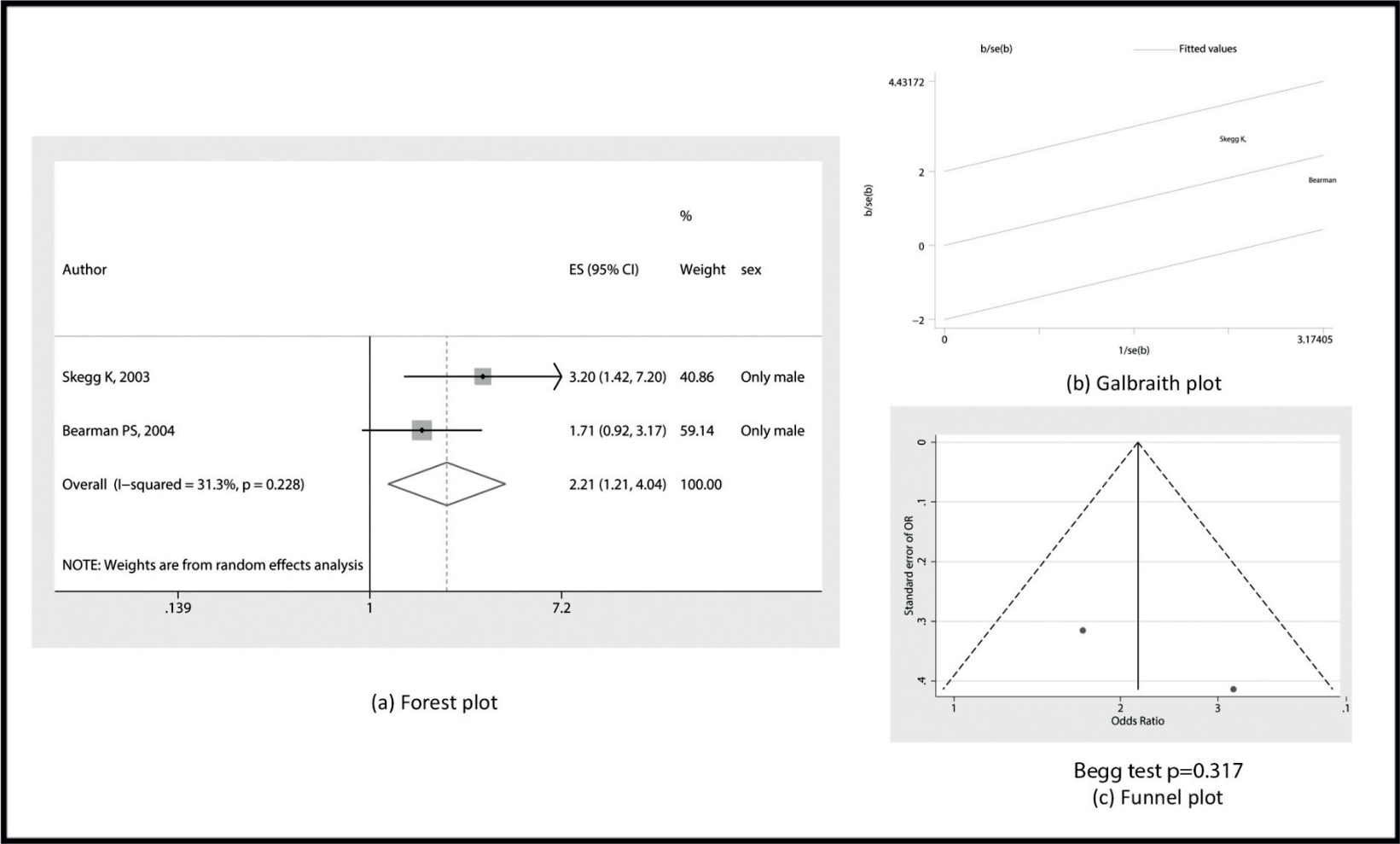
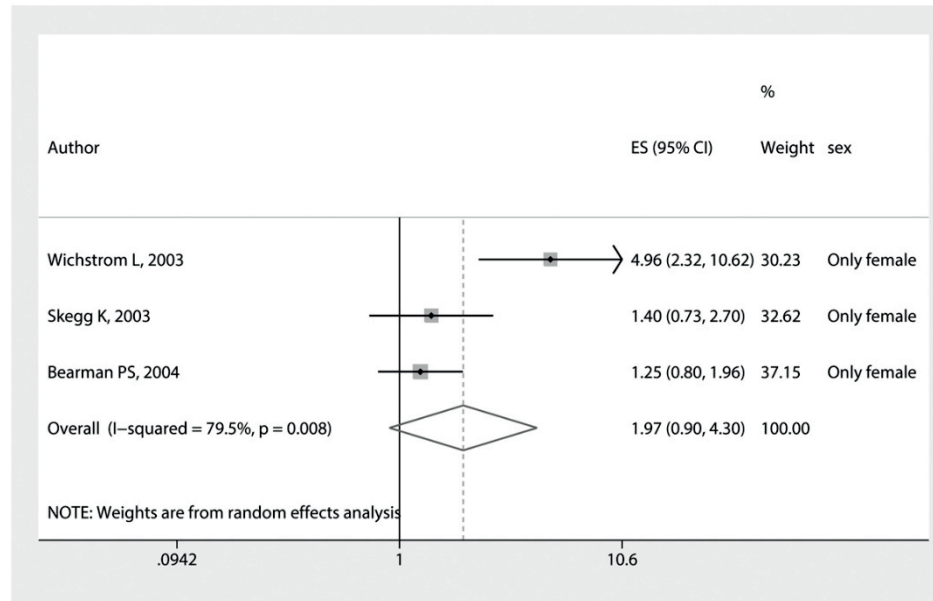
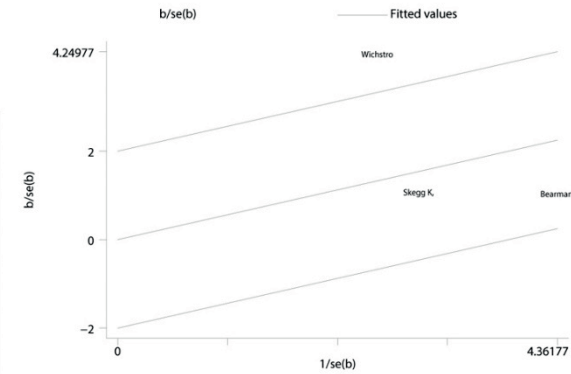


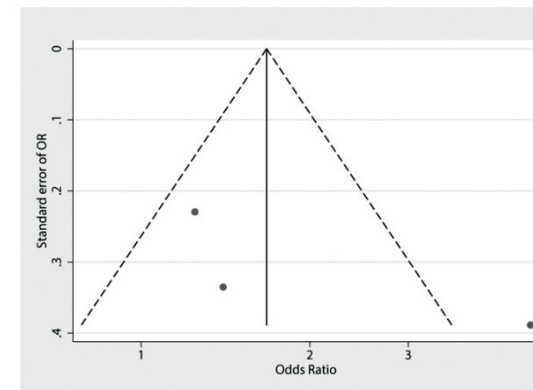
Fig. DS2



(a) Forest plot

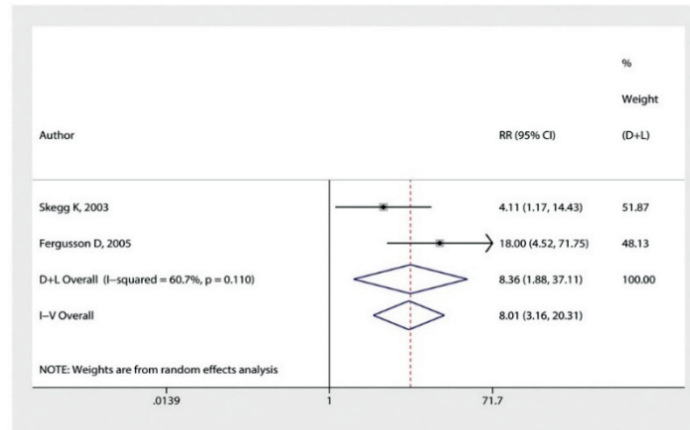


(b) Galbraith plot

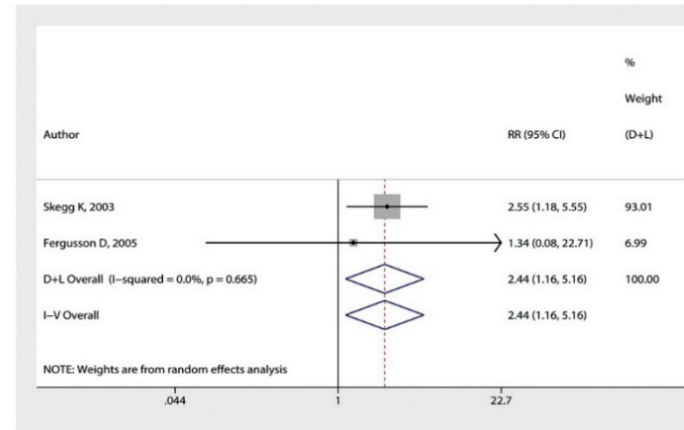


(c) Funnel plot

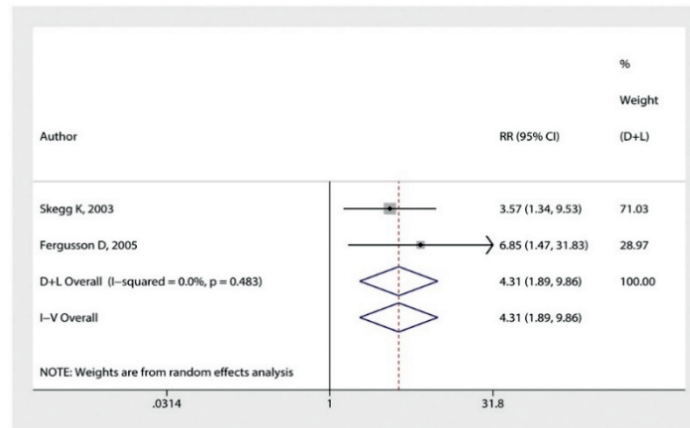
Fig. DS3



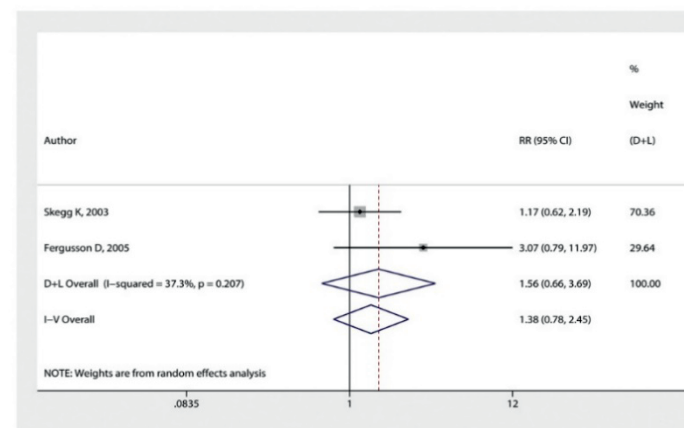
(a)



(b)

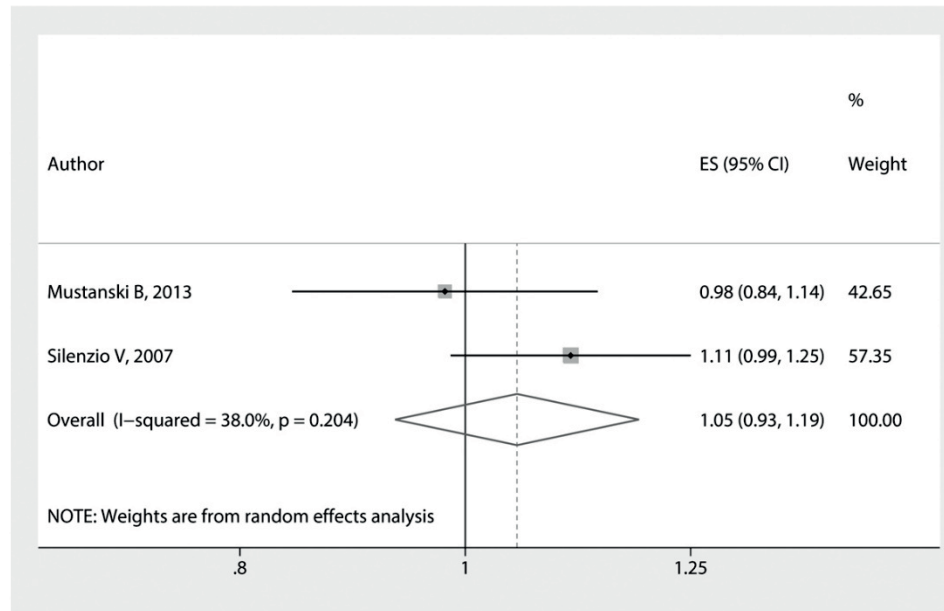


(c)

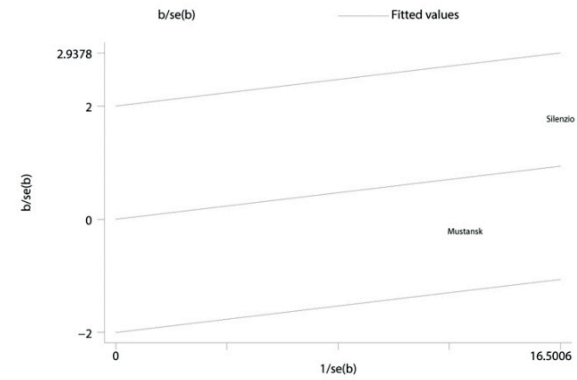


(d)

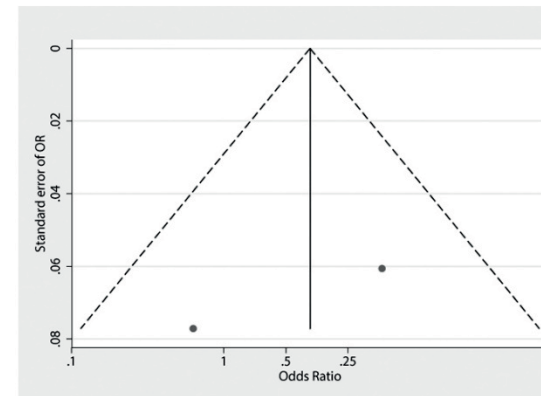
Fig. DS4



(a) Forest plot



(b) Galbraith plot



Begg test p=0.317

(c) Funnel plot