

# THE LANCET Psychiatry

## Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Walker S, MacKay E, Barnett P, et al. Clinical and social factors associated with increased risk for involuntary psychiatric hospitalisation: a systematic review, meta-analysis, and narrative synthesis. *Lancet Psychiatry* 2019; **6**: 1039–53.

# Appendix

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## Appendix 1: Full search strategies

### Literature search: Social and clinical risk factors of involuntary psychiatric hospitalisation

#### Summary

Date of search 21-May-2018

- MEDLINE, n=2025
- PsycINFO, n=1954
- Embase, n=1799
- Cochrane Library, n=452

Total=6231

De-duplicated, to screen, n=4783

#### Search Strategies

##### 1. Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid

MEDLINE(R) Daily and Ovid MEDLINE(R) <1946 to Present>

Search Strategy:

-----  
1 exp Mental Health Services/ (87849)  
2 Emergency Services, Psychiatric/ (2321)  
3 Hospitals, psychiatric/ or Psychiatry Department, Hospital/ (24388)  
4 (psychiatr\* adj3 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients)).ti,ab,kf. (13223)  
5 Mentally Ill Persons/ (5848)  
6 mental health/ or mental disorders/ (176779)  
7 (((mental or psychiatr\*) adj (health or disorder\* or disease\* or deficien\* or illness\* or problem\*))  
or psychotic or psychosis or psychoses or psychopath\* or schizo\* or SMI or personality disorder\*  
or bipolar or ((suicid\* or self-harm) adj3 (risk or crisis or crises))).ti,ab,kf. (452804)  
8 exp "schizophrenia spectrum and other psychotic disorders"/ (138078)  
9 Substance related disorders/ (89201)  
10 Forensic Psychiatry/ (8681)  
11 or/1-10 (693137)  
12 "Commitment of Mentally Ill"/ (6618)  
13 Involuntary Treatment/ (7)  
14 commitment.ti. (6075)  
15 ((psychiatr\* or mental\* or psychos\* or schizo\*) adj3 commit\*).ti,ab,kf. (1189)  
16 ((commitment or restriction or court) adj2 order?).ti,ab,kf. (635)  
17 ((mental health adj (act? or jurisdiction or law? or legal\* or legislat\*)) and (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or  
detention\* or section\* or treat\* or care)).mp. (1315)  
18 ((compulsory or forced or involunt\* or in-volunt\* or mandat\*) adj3 (admission\* or admitt\* or  
readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or  
detention\* or  
section\* or treat\* or care)).ti,ab,kf. (7857)  
19 or/12-18 (19859)  
20 RISK FACTORS/ (724861)  
21 SEX FACTORS/ (243806)  
22 AGE FACTORS/ (421753)  
23 "SOCIAL DETERMINANTS of HEALTH"/ (1545)  
24 SOCIOECONOMIC FACTORS/ (140517)

25 SOCIAL ENVIRONMENT/ (41015)  
 26 FAMILY CHARACTERISTICS/ or exp MARITAL STATUS/ (55688)  
 27 UNEMPLOYMENT/ (6332)  
 28 POVERTY AREAS/ or POVERTY/ (38358)  
 29 VIOLENCE/ or AGGRESSION/ (56317)  
 30 ETHNIC GROUPS/ (56505)  
 31 ANCESTRY GROUP.hw. (137098)  
 32 RELIGION/ (13387)  
 33 MINORITY GROUPS/ (12469)  
 34 HOMELESS PERSONS/ (6799)  
 35 ((characteristic\* or correlat\* or determinant\* or factor\* or predict\* or relationship\* or risk\* or  
 susceptib\* or trajector\*) adj3 (age? or gender\* or ethnic\* or family or social\* or religion or  
 religious  
 or psychosocial\* or socioeconomic\* or socio-economic\* or poverty or impover\* or depriv\* or  
 disadvantaged or employment or unemploy\* or homeless\* or housing or urban\* or suburban\*  
 or  
 rural\* or demograph\* or agressi\* or violen\* or criminal\*)).ti,ab,kf. (378110)  
 36 or/20-35 (1819518)  
 37 11 and 19 and 36 (1903)  
 38 \*"Commitment of Mentally Ill"/ (4329)  
 39 (psychiatr\* adj1 (involuntary or commitment)).ti. (124)  
 40 ((characteristic\* or correlat\* or determinant\* or factor\* or predict\* or relationship\* or risk\*  
 or  
 reason? or role? or susceptib\* or trajector\*) adj5 (compulsory or forced or involunt\* or in-  
 volunt\* or  
 mandat\*) adj5 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or  
 inpatients or commit\* or detain\* or detention\* or section\* or treat\* or care)).ti,ab,kf. (584)  
 41 exp mental disorders/ (1124033)  
 42 revolving door.mp. (294)  
 43 (38 and 36) or 39 or (40 and (11 or 41 or 42)) (1135)  
 44 37 or 43 (2235)  
 45 remove duplicates from 44 (2226)  
 46 (1983\* or 1984\* or 1985\* or 1986\* or 1987\* or 1988\* or 1989\* or 199\* or  
 20\*).yr,dp,dt,ep,ez.  
 (22323298)  
 47 45 and 46 (2025)  
 \*\*\*\*\*

## 2. Ovid PsycINFO <1806 to May Week 2 2018>

### Search Strategy:

[As the scope of this database is already indicative of the population, the search is based on  
*involuntary*  
*treatment and risk factors* only]

-----  
 1 "Commitment (Psychiatric)"/ (1597)  
 2 Involuntary Treatment/ (1200)  
 3 ((psychiatr\* or mental\* or psychos\* or schizo\*) adj3 commit\*).ti,ab,id. (2001)  
 4 ((mental health adj (act? or jurisdiction or law? or legal\* or legislat\*)) and (admission\* or  
 admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\*  
 or  
 detention\* or section\* or treat\* or care)).ti,ab,id. (1554)  
 5 ((compulsory or forced or involunt\* or in-volunt\* or mandat\*) adj3 (admission\* or admitt\* or  
 readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or  
 detention\* or  
 section\* or treat\* or care)).ti,id. (2061)

6 ((commitment or restriction or court) adj2 order?).ti,ab,id. (550)

7 legal detention/ (680)

8 or/1-7 (7106)

9 (characteristic\* or correlat\* or determinant\* or factor\* or predict\* or relationship\* or risk\* or reason? or role? or susceptib\* or trajector\*).ti,id. (799493)

10 (1 or 2) and 9 (455)

11 Risk Factor/ (70525)

12 At Risk Populations/ (35694)

13 Predisposition/ (3523)

14 \*Age Differences/ (53680)

15 exp \*Sociocultural Factors/ or exp \*Psychosocial Factors/ or exp \*Socioeconomic Status/ (137964)

16 \*Demographic Characteristics/ or exp \*Sociocultural Factors/ (104023)

17 \*Social Issues/ or exp \*Homeless/ or \*Poverty/ or exp \*Social Discrimination/ or exp \*Social Integration/ or \*Unemployment/ (36516)

18 exp \*Violence/ or \*Antisocial Behavior/ (66253)

19 \*Aggressive Behavior/ or \*Conflict/ (33644)

20 \*"Racial and Ethnic Differences"/ or exp \*"Racial and Ethnic Groups"/ (96536)

21 \*Religious Beliefs/ or \*Religiosity/ or exp \*Religious Affiliation/ or \*Religion/ or \*Religious Conversion/ (37095)

22 \*Marriage/ or \*"Marriage and Family Measures"/ or \*Family Relations/ or \*Family Structure/ or \*Home Environment/ or \*Marital Relations/ (49617)

23 Disadvantaged/ or Cultural Deprivation/ or exp Social Deprivation/ (15181)

24 \*Intellectual Development Disorder/ or \*Developmental Disabilities/ or \*Cognitive Impairment/ or \*Cognitive Ability/ (98389)

25 Social Environments/ or Poverty Areas/ or \*Rural Environments/ or \*Suburban Environments/ or \*Urban Environments/ (29368)

26 \*Client Characteristics/ (12356)

27 \*Human Sex Differences/ (78319)

28 \*Regional Differences/ (2023)

29 \*Protective Factors/ (2824)

30 ((characteristic\* or correlat\* or determinant\* or factor\* or predict\* or relationship\* or risk\* or susceptib\* or trajector\*) adj3 (age? or gender\* or ethnic\* or family or social\* or religion or religious or psychosocial\* or socioeconomic\* or socio-economic\* or poverty or impover\* or depriv\* or disadvantaged or employment or unemploy\* or homeless\* or housing or urban\* or suburban\* or rural\* or demograph\* or agressi\* or violen\* or criminal\*).ti,ab,id. (231745)

31 or/11-30 (867447)

32 8 and 31 (1577)

33 ((characteristic\* or correlat\* or determinant\* or factor\* or predict\* or relationship\* or risk\* or reason? or role? or susceptib\* or trajector\*) adj5 (compulsory or forced or involunt\* or involunt\* or mandat\*) adj5 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or detention\* or section\* or treat\* or care)).ti,ab,id. (440)

34 10 or 32 or 33 (2075)

35 (1983\* or 1984\* or 1985\* or 1986\* or 1987\* or 1988\* or 1989\* or 199\* or 20\*).yr,an. (3782724)

36 34 and 35 (1954)

\*\*\*\*\*

### 3. Ovid Embase <1974 to 2018 Week 21>

Search Strategy:

- 
- 1 Mental Health Service/ (53160)
  - 2 Psychiatric Emergency service/ (88)
  - 3 Mental Hospital/ or Mental Patient/ (50837)
  - 4 Psychiatric Department/ (7535)
  - 5 (psychiatr\* adj3 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients)).ti,ab,kw. (18505)
  - 6 psychiatric.ti,kw,hw. and Hospital Patient/ (5284)
  - 7 (((mental or psychiatr\*) adj (health or disorder\* or disease\* or deficien\* or illness\* or problem\*)) or psychotic or psychosis or psychoses or psychopath\* or schizo\* or SMI or personality disorder\* or bipolar or ((suicid\* or self-harm) adj3 (risk or crisis or crises))).ti,ab,kw. (570844)
  - 8 Mental Health/ or Mental Disease/ (306988)
  - 9 exp Psychosis/ (266698)
  - 10 exp Personality Disorder/ (57342)
  - 11 \*Substance Abuse/ or \*Drug Dependence/ (46014)
  - 12 Forensic Psychiatry/ (12966)
  - 13 or/1-12 (872750)
  - 14 involuntary commitment/ (1061)
  - 15 commitment.ti. (6847)
  - 16 ((psychiatr\* or mental\* or psychos\* or schizo\*) adj3 commit\*).ti,ab,kw. (1496)
  - 17 ((commitment or restriction or court) adj2 order?).ti,ab,kw. (681)
  - 18 ((mental health adj (act? or jurisdiction or law? or legal\* or legislat\*)) and (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or detention\* or section\* or treat\* or care)).mp. (1791)
  - 19 ((compulsory or forced or involunt\* or in-volunt\* or mandat\*) adj3 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or detention\* or section\* or treat\* or care)).ti,ab,kw. (10828)
  - 20 or/14-19 (20558)
  - 21 Risk Factor/ (873854)
  - 22 High Risk Patient/ (109492)
  - 23 \*"Gender and Sex"/ or Sex Difference/ or Sex Ratio/ (411234)
  - 24 Age Distribution/ (129326)
  - 25 "Social Determinants of health"/ (3875)
  - 26 Socioeconomics/ (133608)
  - 27 Social Environment/ or Psychosocial Environment/ (34792)
  - 28 Poverty/ or Social Status/ or Unemployment/ (128727)
  - 29 Violence/ or exp \*violence/ (93549)
  - 30 \*Aggression/ (21705)
  - 31 "Ethnic or Racial Aspects"/ or Cultural Factor/ or Ethnic Difference/ or Ethnicity/ or Race/ or Race Difference/ (227002)
  - 32 Ancestry Group/ (3156)
  - 33 Religion/ or Religious Group/ (65528)
  - 34 Marriage/ (52248)
  - 35 Minority group/ (13798)
  - 36 exp Homeless Person/ (894)
  - 37 Vulnerable Population/ (12714)
  - 38 Mental Capacity/ or Mental Ddeficiency/ or Intellectual Impairment/ (90993)

39 \*Rural Population/ or \*Suburban Population/ or \*Urban Population/ or Urban Rural Difference/ or Geographic Distribution/ (175825)  
 40 ((characteristic\* or correlat\* or determinant\* or factor\* or predict\* or relationship\* or risk\* or susceptib\* or trajector\*) adj3 (age? or gender\* or ethnic\* or family or social\* or religion or religious or psychosocial\* or socioeconomic\* or socio-economic\* or poverty or impover\* or depriv\* or disadvantaged or employment or unemploy\* or homeless\* or housing or urban\* or suburban\* or rural\* or demograph\* or agres\* or violen\* or criminal\*)):ti,ab,kw. (478727)  
 41 or/21-40 (2460643)  
 42 13 and 20 and 41 (2229)  
 43 \*Involuntary Commitment/ (502)  
 44 (psychiatr\* adj1 (involuntary or commitment)):ti. (150)  
 45 ((characteristic\* or correlat\* or determinant\* or factor\* or predict\* or relationship\* or risk\* or reason? or role? or susceptib\* or trajector\*) adj5 (compulsory or forced or involunt\* or involunt\* or mandat\*) adj5 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or detention\* or section\* or treat\* or care)):ti,ab,kw. (837)  
 46 exp Mental Disease/ (1987188)  
 47 \*Hospital Readmission/ or revolving door.mp. (9699)  
 48 (43 and 41) or 44 or (45 and (13 or 46 or 47)) (594)  
 49 42 or 48 (2551)  
 50 (1983\* or 1984\* or 1985\* or 1986\* or 1987\* or 1988\* or 1989\* or 199\* or 20\*).yr,dc,dp. (27829995)  
 51 49 and 50 (2372)  
 52 limit 51 to (article-in-press status or conference abstract status or embase status or inprocess status) (1799)  
 \*\*\*\*\*

#### 4. The Cochrane Library

- Cochrane Database of Systematic Reviews : Issue 5 of 12, May 2018
  - Cochrane Central Register of Controlled Trials : Issue 4 of 12, April 2018
  - Database of Abstracts of Reviews of Effect : Issue 2 of 4, April 2015
  - Health Technology Assessment Database : Issue 4 of 4, October 2016
  - NHS Economic Evaluation Database : Issue 2 of 4, April 2015
- ID Search
- #1 MeSH descriptor: [Commitment of Mentally Ill] this term only  
 #2 MeSH descriptor: [Involuntary Treatment, Psychiatric] this term only  
 #3 ((psychiatr\* or mental\* or psychos\* or schizo\*) near/3 commit\*):ti,ab,kw (Word variations have been searched)  
 #4 ((commitment or restriction or court) near/2 order\*):ti,ab,kw (Word variations have been searched)  
 #5 (mental health near/3 (act\* or jurisdiction or law\* or legal\* or legislat\*)):ti,ab,kw (Word variations have been searched)  
 #6 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or detention\* or section\* or treat\* or care):ti,ab,kw (Word variations have been searched)  
 #7 #5 and #6  
 #8 ((compulsory or forced or involunt\* or in-volunt\* or mandat\*) near/3 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients or commit\* or detain\* or detention\* or section\* or treat\* or care)):ti,ab,kw (Word variations have been searched)

#9 #7 or #8  
#10 MeSH descriptor: [Mental Disorders] explode all trees  
#11 MeSH descriptor: [Mental Health Services] explode all trees  
#12 MeSH descriptor: [Emergency Services, Psychiatric] this term only  
#13 MeSH descriptor: [Hospitals, Psychiatric] this term only  
#14 MeSH descriptor: [Psychiatric Department, Hospital] this term only  
#15 (psychiatr\* near/3 (admission\* or admitt\* or readmi\* or re-admi\* or hospitali\* or in-patients or inpatients)):ti,ab,kw (Word variations have been searched)  
#16 MeSH descriptor: [Mentally Ill Persons] this term only  
#17 MeSH descriptor: [Mental Health] this term only  
#18 (((mental or psychiatr\*) next (health or disorder\* or disease\* or deficien\* or illness\* or problem\*)) or psychotic or psychosis or psychoses or psychopath\* or schizo\* or SMI or "personality disorder\*" or bipolar or ((suicid\* or self-harm) near/3 (risk or crisis or crises)) or mania or manic or "substance use disorder\*"):ti,ab,kw  
#19 (addiction or "anorexia nervosa" or bulimi\* or (self next (injur\*)) or cyclothymic\* or depression or depressive or "anxiety disorder\*" or agoraphobia or "obsessive compulsive" or panic or phobi\* or PTSD or "posttrauma\* stress" or "post trauma\* stress" or neurosis or neuroses or hysteria or hysterical):ti,kw  
#20 #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19  
#21 (#9 and #20)  
#22 (characteristic\* or correlat\* or determinant\* or factor\* or predict\* or relationship\* or risk\* or reason? or role? or susceptib\* or trajector\*):ti,ab,kw (Word variations have been searched)  
#23 #21 and #22  
#24 #1 or #2 or #3 or #4 or #23  
#25 MeSH descriptor: [Forensic Psychiatry] explode all trees  
#26 #25 and (#6 or #22)  
#27 #24 or #26  
Date Limited: 1983 to date  
\*\*\*\*\*



## Appendix 2. Quality assessment scores

Reviewer Initials	Author and date	Clear objective?	Study design appropriate?	Method of comparison group selection appropriate?	Group characteristics sufficiently described?	Outcome and exposure measure well defined?	Sample size appropriate	Analytic methods described and justified?	Variance reported?	Controlled for confounding?	Results reported in sufficient detail?	Conclusions supported by the results?	Total	Linear Score	Quality rating
SW	Aguglia 2016	2	2	2	2	2	2	1	1	0	1	1	16	72.73	M
SW	Balducci 2017	2	2	2	1	2	2	2	2	1	2	2	20	90.91	H
SW	Bauer 2007	2	2	2	2	2	2	1	2	1	1	1	18	81.82	H
SW	Beck 1984	1	2	1	0	1	1	1	0	0	0	1	8	36.36	L
SW	Bindman 2002	2	2	1	1	1	2	1	1	2	1	1	15	68.18	M
SW	Blank 1989	2	2	2	1	2	1	1	2	0	2	2	17	77.27	H
CDL	Bonsack 2005	1	1	1	1	1	0	0	0	0	0	1	6	27.27	L
FL	Bruns 1991	1	1	1	0	1	1	0	0	0	0	1	6	27.27	L
LSR	Burnett 1999	2	1	2	2	2	1	1	0	0	1	1	13	59.09	M
SW	Canova 2018	2	1	2	2	1	1	2	2	1	2	2	18	81.82	H
SW	Casella 2014	2	2	2	1	1	1	1	2	0	1	1	14	63.64	M
SW	Chang 2013	2	1	1	1	0	1	0	1	0	1	1	9	40.91	L
SW	Chiang 2017	2	2	2	1	1	2	1	2	2	1	1	17	77.28	H
LSR	Cole 1995	1	1	1	1	1	1	1	1	0	1	1	10	45.45	M
SW	Cougnard 2004	2	2	2	2	1	1	2	2	2	2	1	19	86.36	H
SW	Craw 2006	2	2	2	2	2	1	1	2	1	1	1	17	77.27	H
SW	Cristanti 2001	2	2	2	0	2	2	2	2	2	1	1	18	81.82	H
SW	Curley 2016	2	2	1	1	1	2	2	2	2	2	1	18	81.82	H
CDL	de Girolamo 2009	2	2	2	2	1	1	1	1	0	1	2	15	68.18	M
SW	Delayahu 2014	2	1	1	1	0	1	1	1	0	1	1	10	45.45	M

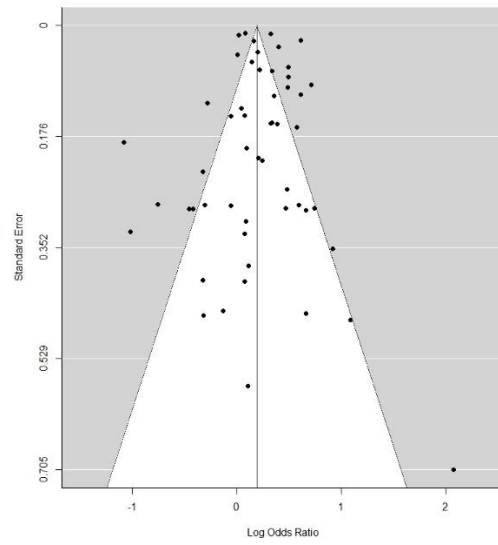
SW	Di Lorenzo 2018	1	1	1	1	2	1	1	2	0	1	1	12	54.55	M
LSR	Donisi 2016	2	2	2	1	2	2	2	2	1	2	2	20	90.91	H
SW	Emons 2014	2	2	2	0	2	2	1	2	0	1	1	15	68.18	M
SW	Eytan 2012	1	1	1	1	1	1	1	2	2	1	1	13	59.09	M
SW	Fok 2014	2	2	2	1	2	2	2	2	2	2	2	21	95.45	H
SW	Folnegovic-Smalc 2000	2	1	2	1	1	1	2	2	1	2	1	16	72.73	M
ML	Gaddini 2008	1	2	2	2	1	2	1	0	0	1	2	14	63.64	M
VDG	Garcia Cabeza 1998	2	1	1	2	2	1	1	0	0	1	1	12	54.55	M
SW	Gou 2014	2	2	2	2	2	1	1	2	2	1	1	18	81.82	H
LSR	Gultekin 2013	2	1	2	2	2	1	1	2	0	2	2	17	77.27	H
LSR	Hansson 1999	2	1	1	0	2	2	1	2	1	2	2	16	72.73	M
ML	Hatling 2002	0	1	1	1	2	1	2	1	1	1	2	13	59.09	M
ML	Hoffman 2017	1	2	1	1	2	2	1	1	1	1	1	14	63.64	M
SW	Hotzy 2019	1	1	1	1	2	2	1	2	0	1	1	13	59.09	M
CDL	Houston 2001	1	0	0	0	1	1	0	0	1	0	1	5	22.73	L
SW	Hugo 1998	1	1	2	0	0	1	0	1	0	1	1	8	36.36	L
ML	Hustoft 2013	2	2	2	1	2	2	1	2	0	1	1	16	72.73	M
CDL	Ielmini 2018	1	2	1	1	1	1	1	0	0	1	1	10	45.45	M
ML	Indu 2016	2	2	1	1	2	2	1	2	2	0	0	15	68.18	M
ML	Isohanni 1990	2	1	0	1	2	1	2	2	2	0	1	14	63.64	M
CDL	Iverson 2002	2	2	2	1	1	1	1	2	1	1	1	15	68.18	M
ML	Kelly 2004	2	1	2	0	0	1	2	1	2	1	1	13	59.09	M
ML	Kelly 2018	1	1	2	2	2	2	0	1	0	2	2	15	68.18	M
ML	Keown 2016	2	1	2	0	1	1	2	2	2	2	2	17	77.27	H
VDG	Lastra Martinez 1993	2	2	2	2	2	1	2	1	0	1	1	16	72.73	M
SW	Lay 2011	1	1	1	0	0	1	2	2	2	1	1	12	54.55	M
ML	Lebenbaum 2018	2	2	1	1	2	2	2	2	2	2	2	20	90.91	H

LSR	Leung 1993	0	1	1	2	1	0	1	1	0	2	1	10	45.45	M
SW	Lin 2018	1	2	1	1	0	2	1	1	0	0	1	10	45.45	M
LSR	Lorant 2007	1	2	2	2	2	2	2	2	2	2	1	20	90.91	H
SW	Luo 2019	2	1	2	2	1	1	1	1	1	1	1	14	63.64	M
SW	Malla 1987	1	1	2	1	2	1	0	0	1	1	1	11	50.00	M
CDL	Mandarelli 2014	2	1	2	2	2	1	2	2	0	1	1	16	72.73	M
EM	Montemagni 2011	2	2	2	1	2	0	1	2	1	1	2	16	72.70	M
EM	Montemagni 2012	1	2	2	1	2	0	1	1	1	1	1	13	59.10	M
EM	Mykelbust 2012	2	1	0	1	0	2	1	2	0	1	1	11	50.00	M
SW	Okin 1996	1	1	1	1	0	1	0	0	0	1	1	7	31.82	L
EM	Olajide 2016	2	2	2	1	1	1	2	1	1	1	2	16	72.70	M
SW	Opjordsmoen 2010	2	2	2	1	0	1	1	1	0	2	2	14	63.64	M
SW	Opsal 2011	2	1	2	1	0	1	1	1	1	1	1	12	54.55	M
EM	Polacheck 2017	1	0	0	0	1	0	0	0	0	0	0	2	9.10	L
EM	Riecher 1991	2	2	1	1	1	2	2	1	0	1	1	14	63.60	M
CDL	Ritsner 2014	1	1	1	0	1	1	1	1	0	0	0	7	31.82	L
SW	Rodrigues 2019	2	2	2	2	1	2	2	2	2	2	2	21	95.45	H
EM	Rooney 1996	1	1	0	0	0	0	1	0	0	0	1	4	18.20	L
SW	Schmitz-Buhl 2019	1	1	1	2	2	1	2	1	2	1	2	16	72.73	M
CDL	Schuepbach 2005	2	2	2	2	1	1	1	2	0	2	1	16	72.73	M
SW	Schuepbach 2008	1	2	2	1	0	1	1	2	2	1	1	14	63.64	M
SW	Serfaty and McCluskey 1998	1	1	0	0	2	0	0	0	0	1	1	6	27.27	L
SW	Silva 2018	2	2	2	2	2	2	2	2	2	2	2	22	100.00	H
CDL	Spengler 1986	2	2	2	1	2	2	2	0	2	2	2	19	86.36	H
SW	Stylianidis 2017	2	2	2	2	1	1	2	2	2	1	1	18	81.82	H

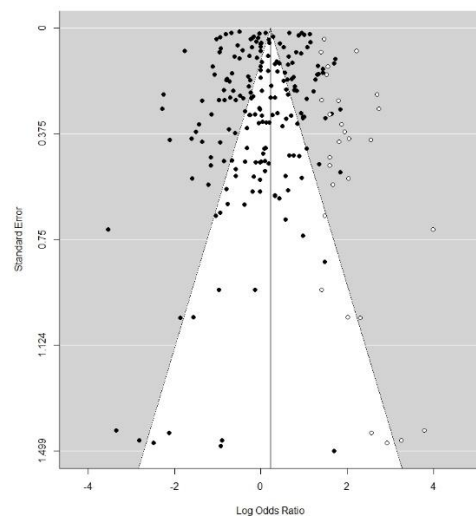
CDL	Tørrissen 2007	1	1	1	1	0	1	0	0	0	0	0	5	22.73	L
SW	Van der post 2009	2	2	2	1	1	1	0	2	2	1	1	15	68.18	M
SW	Wang 2015	1	1	1	1	1	1	1	2	2	1	1	13	59.09	M
EM	Watson 2000	1	1	1	0	1	1	1	1	0	1	1	9	40.91	L
EM	Weich 2017	2	2	2	2	2	2	2	2	2	2	2	22	100.00	H

## Appendix 3: Funnel Plots

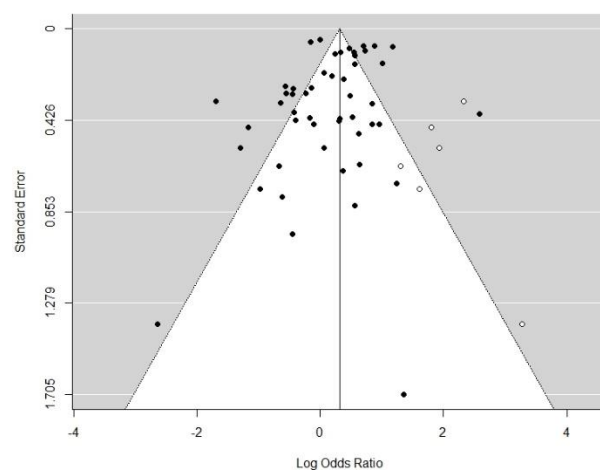
### Gender



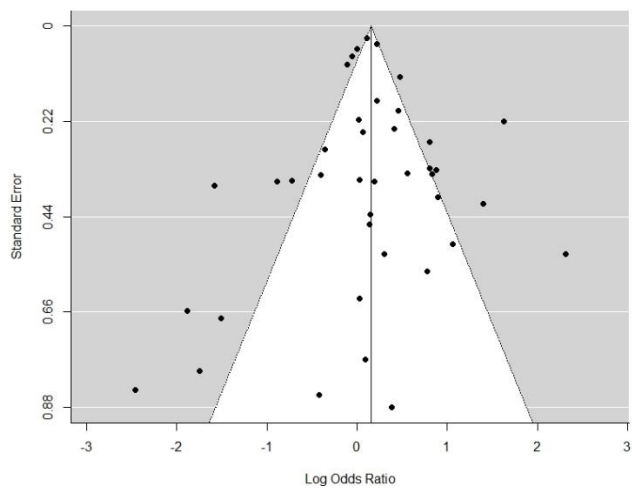
### Diagnosis



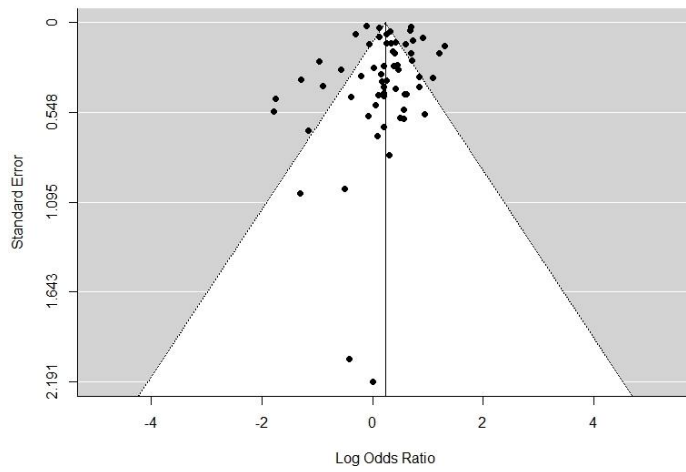
### Employment



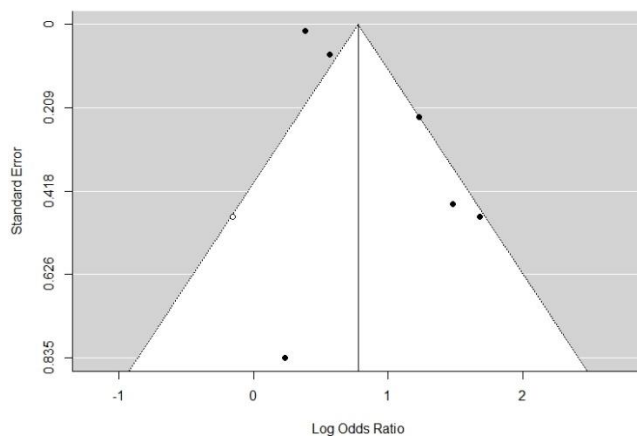
### Housing



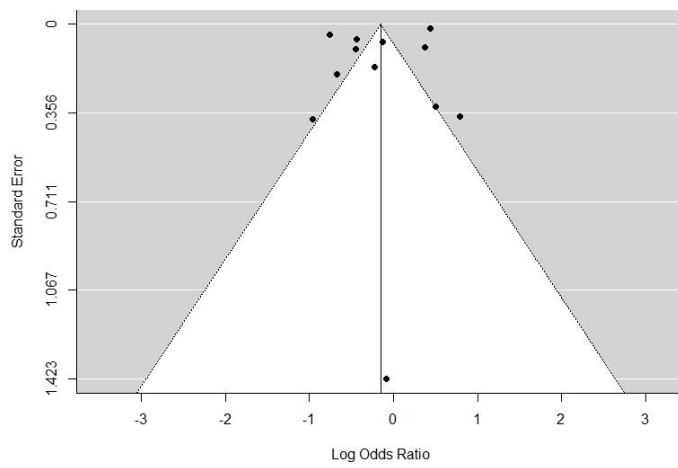
### Relationship



### Previous involuntary admission



## Previous admission



**Appendix 4: Meta-regression results Tables 1, 2, 3, 4, 5 and 6**

**Table 1: Moderators of Previous Care and Involuntary Psychiatric Detention**

	<b>Previous care</b>	<b>K</b>	<b>R<sup>2</sup></b>	<b>p-value</b>
<b>Publication date</b>	Previous Admission	12	0.00%	0.7459
<b>Percent Female</b>	Previous Admission	12	0.00%	0.3754

K = no. of studies

**Table 2: Moderators of Gender and Involuntary Psychiatric Detention**

	<b>Gender</b>	<b>K</b>	<b>R<sup>2</sup></b>	<b>p-value</b>
<b>Mean age</b>	Male (vs female)	16	0.00%	0.5693
<b>Percent Female</b>	Male (vs female)	53	0.00%	0.9235
<b>Publication date</b>	Male (vs female)	53	0.00%	0.7875

K = no. of studies



**Table 3: Moderators of Diagnosis and Involuntary Care**

	<b>Diagnosis</b>	<b>K</b>	<b>R<sup>2</sup></b>	<b>p-value</b>
<b>Mean age</b>	Psychoses	13	0.00%	0.7075
<b>Publication date</b>	Psychosis	37	0.00%	0.6853
	Bipolar	14	0.00%	0.8629
	Depression	10	0.00%	0.7681
	Mood Disorder	20	0.00%	0.9286
	Anxiety	11	0.00%	0.9903
	Personality Disorder	26	0.00%	0.3499
	Substance misuse	23	15.03%	0.0857
	Organic Disorder	14	0.63%	0.3901
<b>Percent Female</b>	Psychosis	36	0.00%	0.68
	Bipolar	14	0.00%	0.7645
	Depression	10	0.00%	0.3547
	Mood Disorder	19	0.00%	0.4773
	Anxiety	11	0.00%	0.9255
	Personality Disorder	25	0.00%	0.6161
	Substance misuse	22	0.00%	0.8871
	Organic Disorder	14	0.07%	0.3113

K = no. of studies

**Table 4: Moderators of Employment and Involuntary care**

	<b>Employment</b>	<b>K</b>	<b>R<sup>2</sup></b>	<b>p-value</b>
<b>Publication date</b>	Unemployed	20	0.00%	0.4713
<b>Percent Female</b>	Unemployed	20	12.41%	0.0974

K = no. of studies

**Table 5: Moderators of Housing Status and Involuntary Care**

<b>Publication date</b>	Living Alone	13	0.00%	0.2004
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K = no. of studies

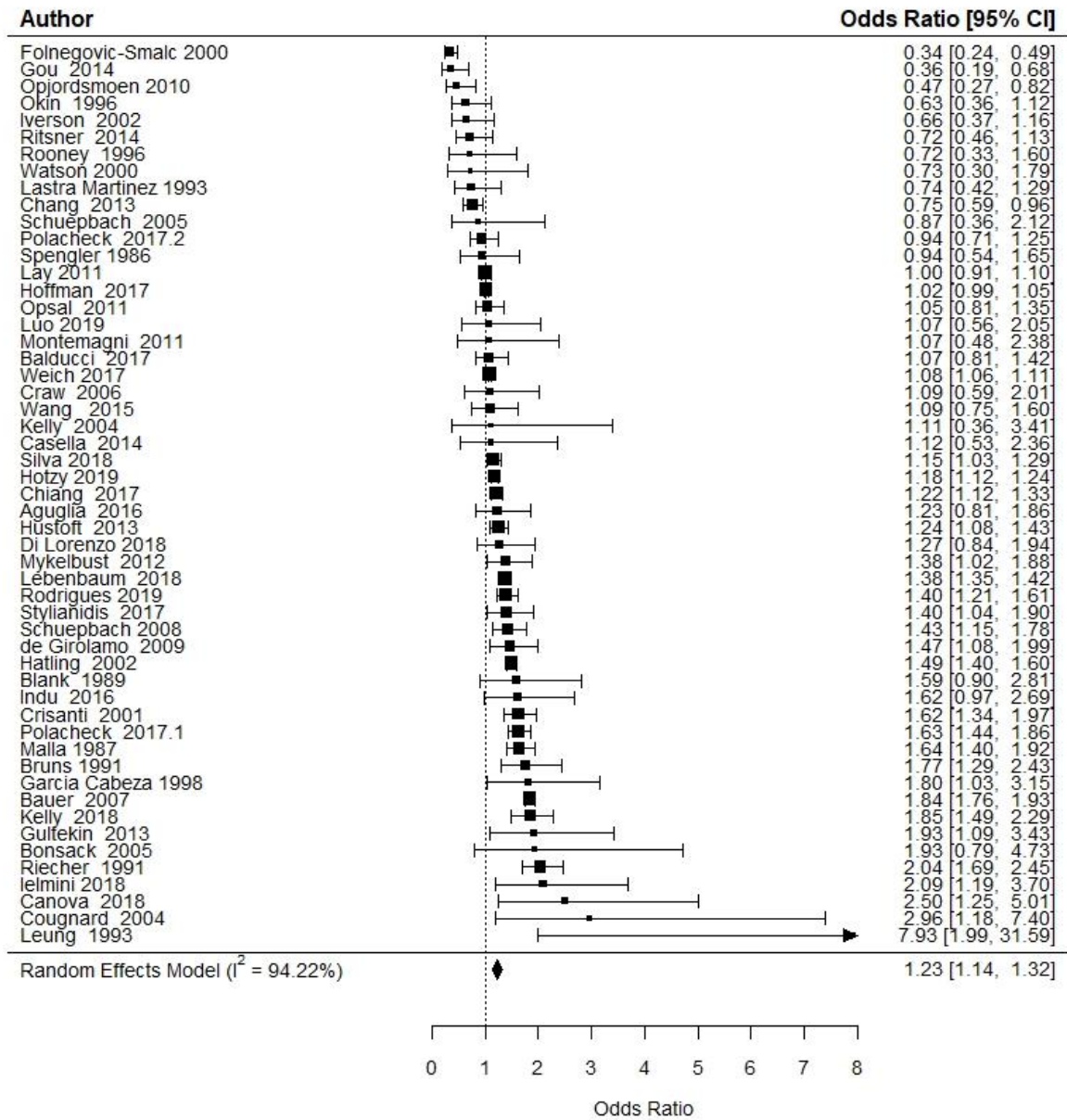
**Table 6: Moderators of Relationship Status and Involuntary Care**

	<b>Relationship</b>	<b>K</b>	<b>R<sup>2</sup></b>	<b>p-value</b>
<b>Mean age</b>	Single	10	0.00%	0.3317
<b>Publication date</b>	Single	28	3.97%	0.4229
<b>Percent Female</b>	Single	28	0.00%	0.7607

K = no. of studies

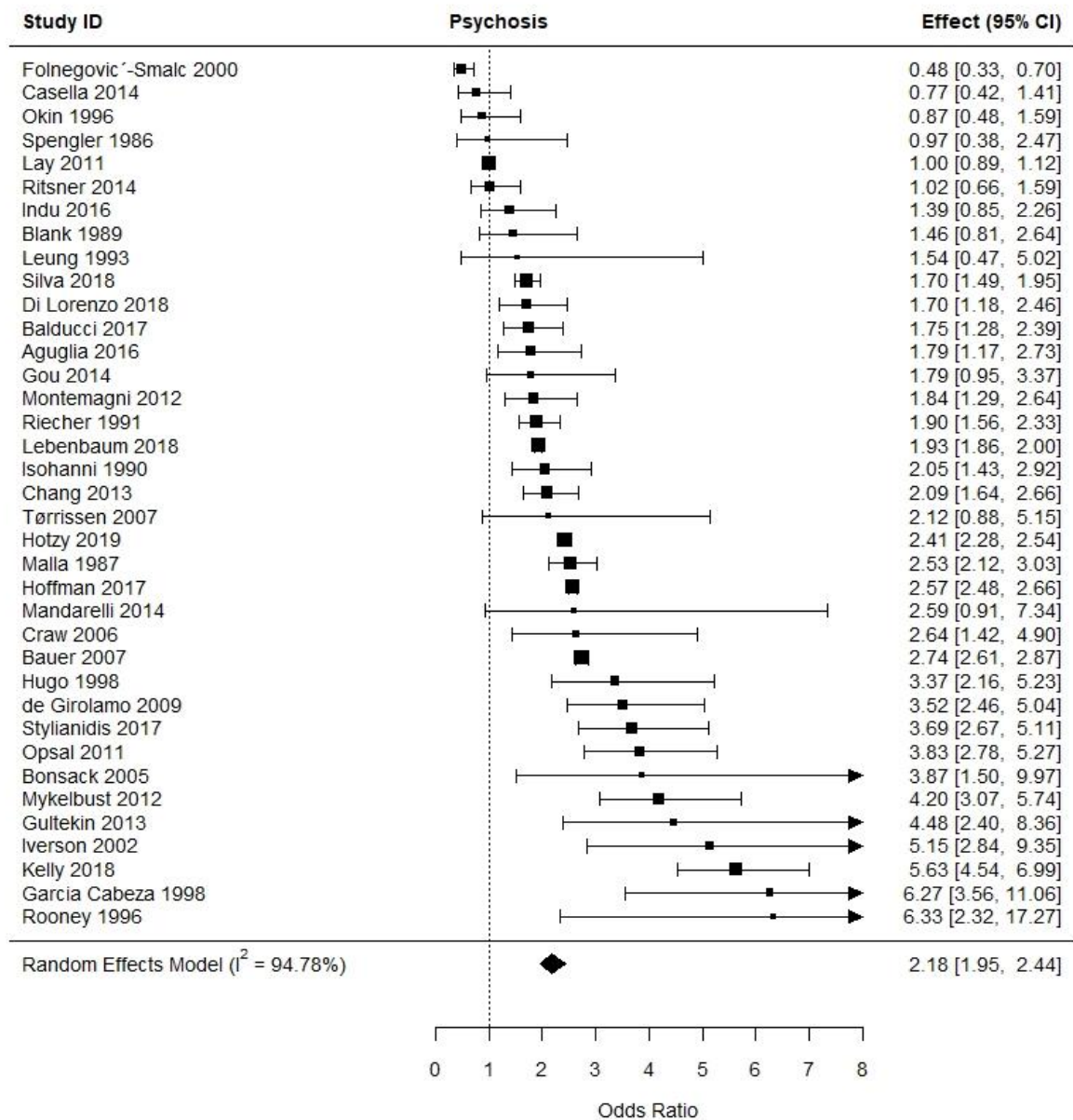
## Appendix 5: Forest Plots

### GENDER

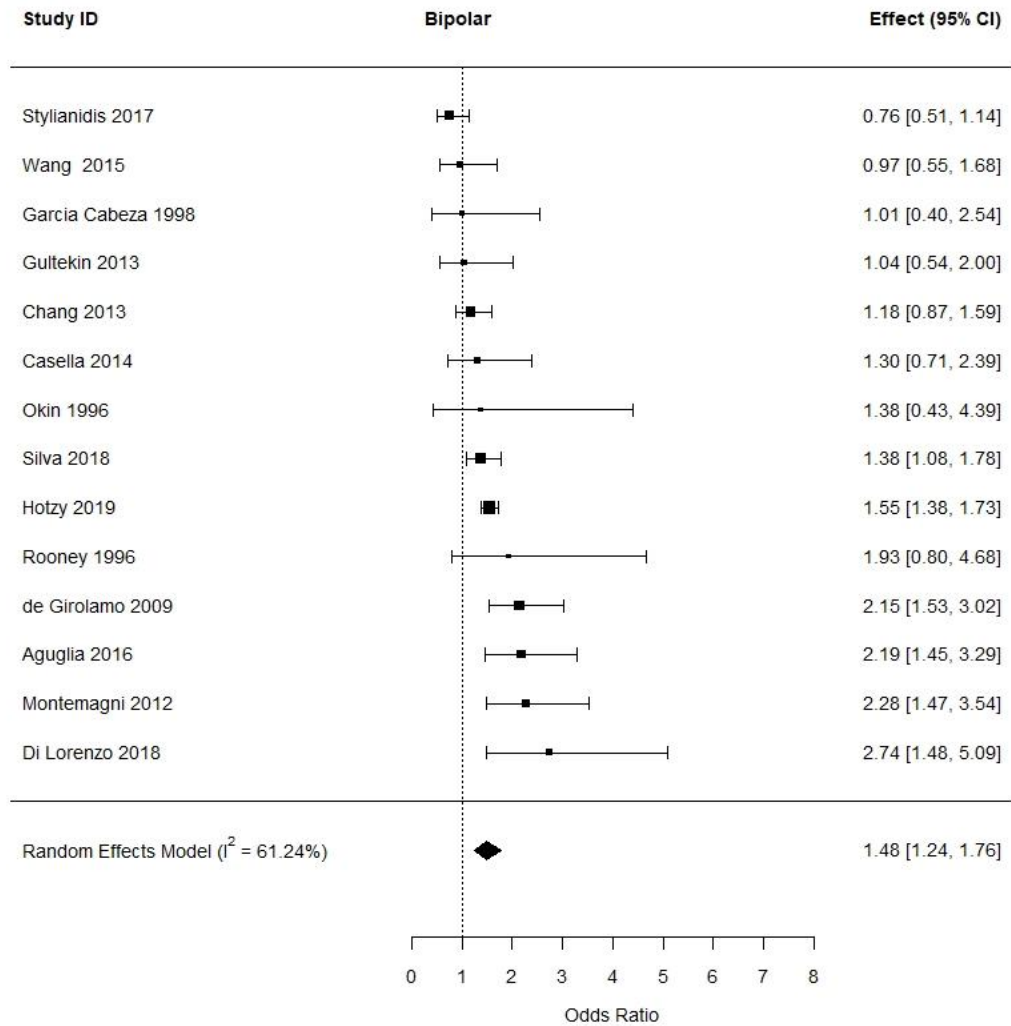


# DIAGNOSIS

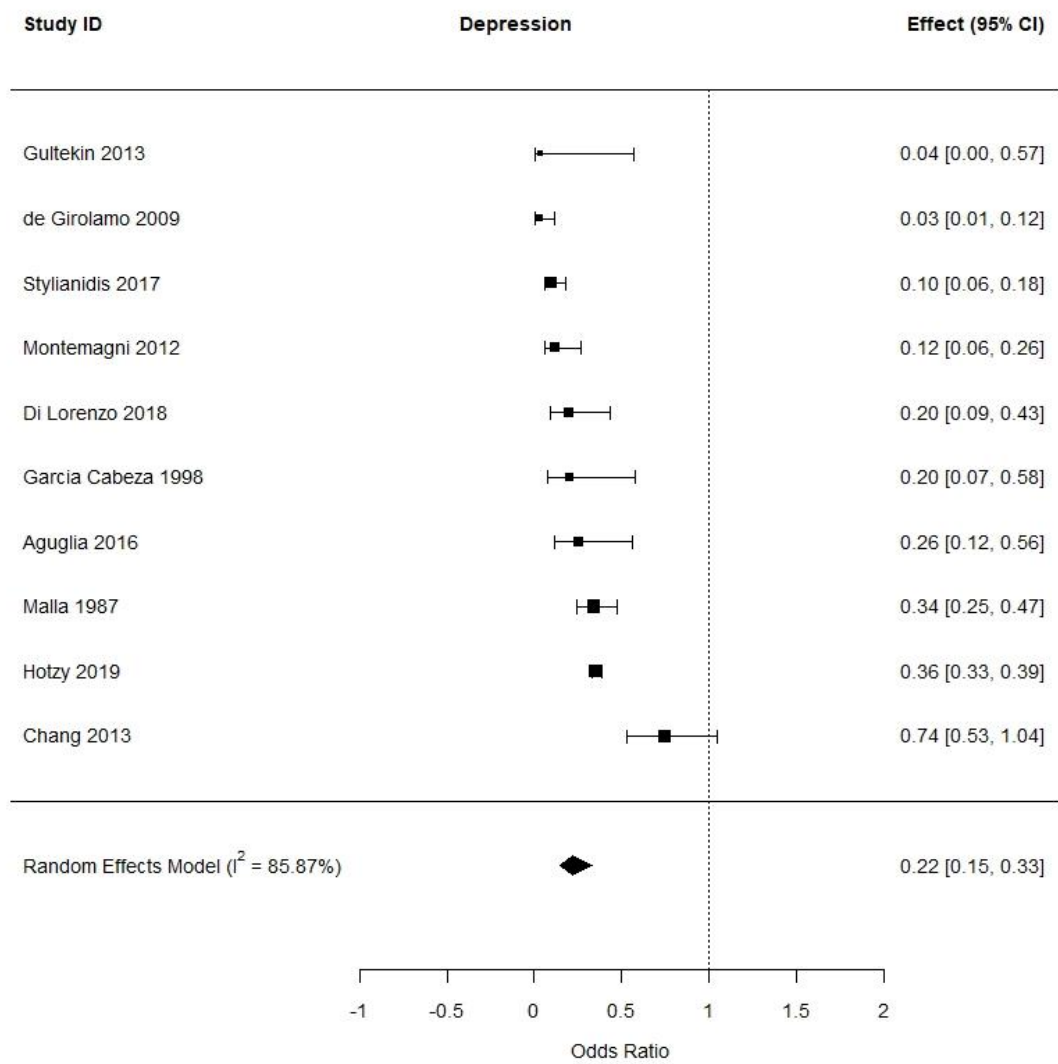
## Psychosis



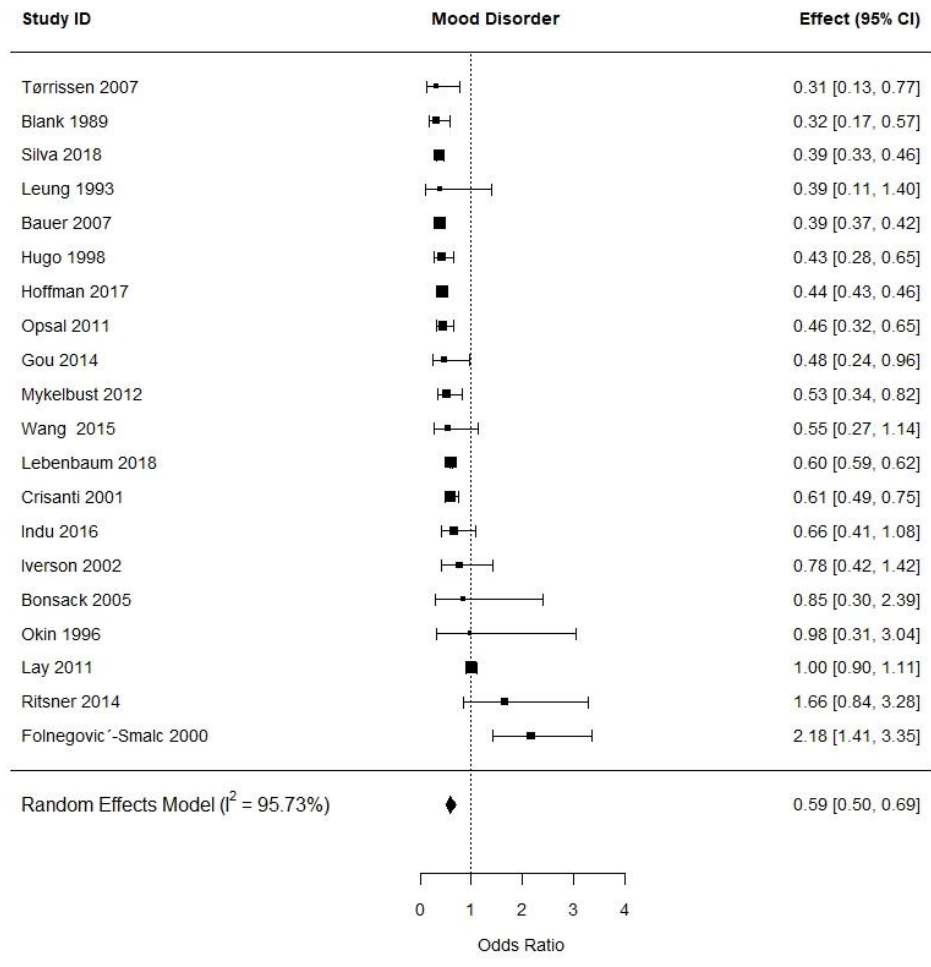
## Bipolar



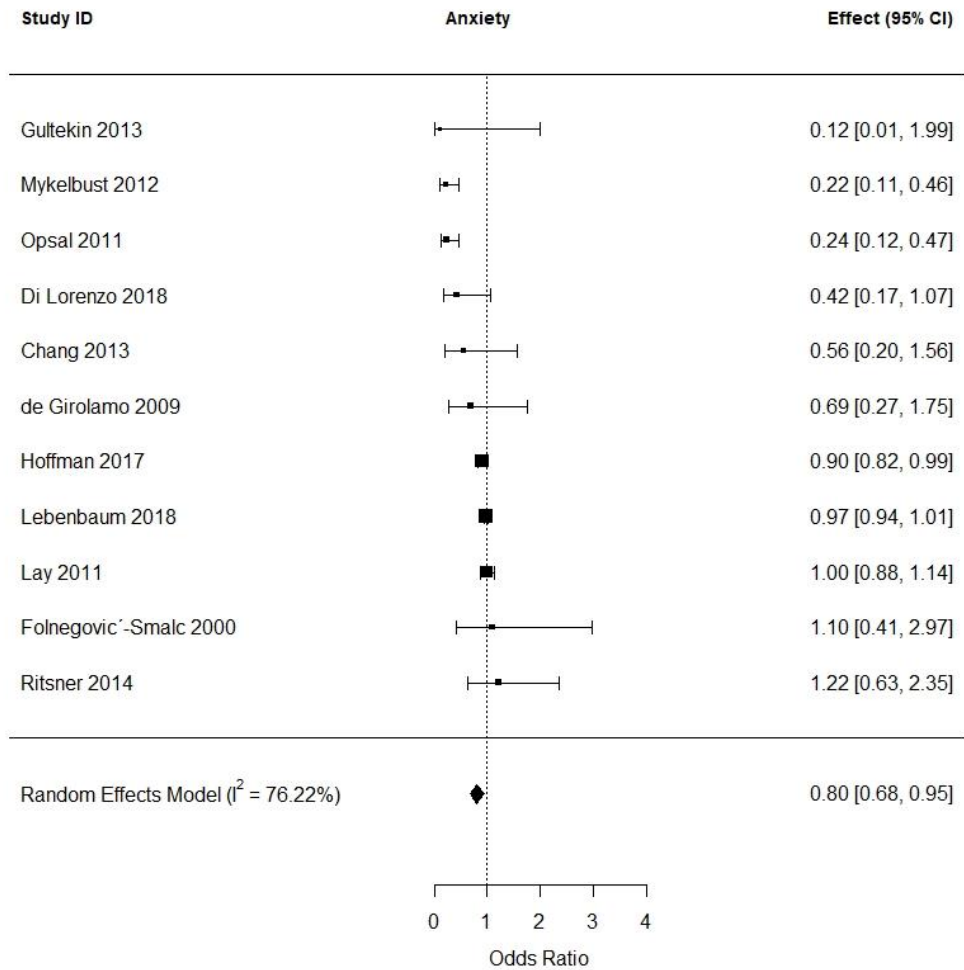
# Depression



# Mood disorder

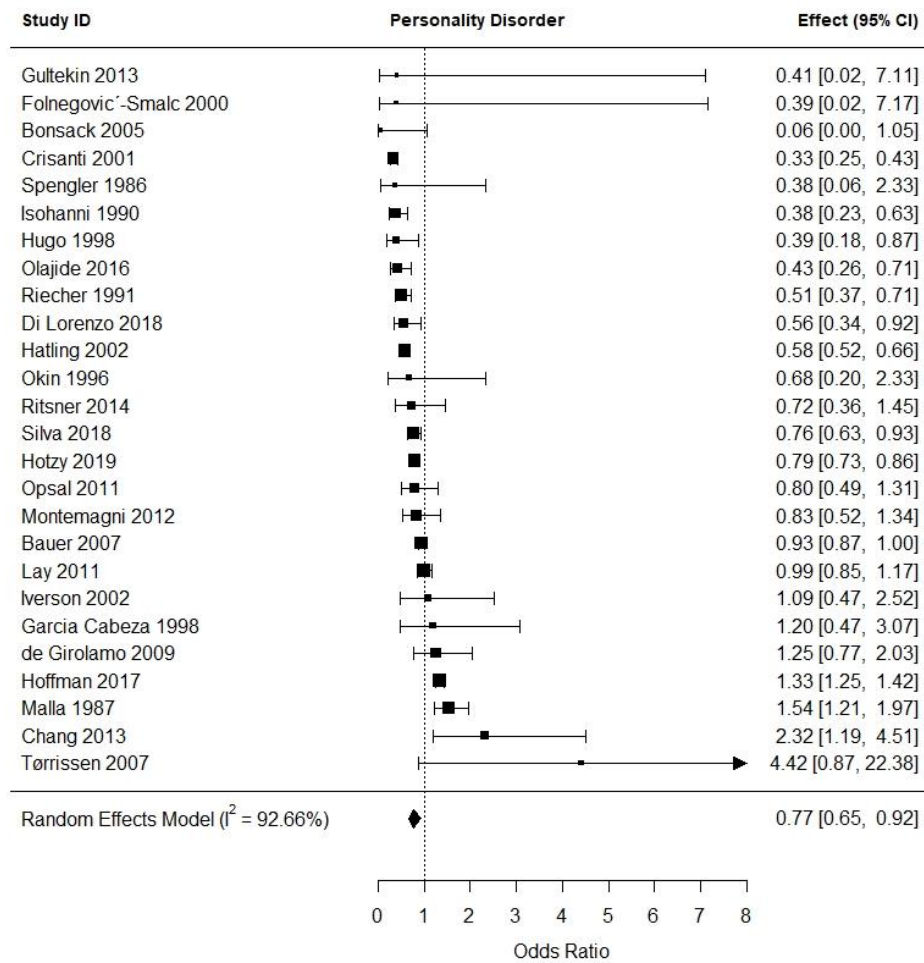


## Anxiety

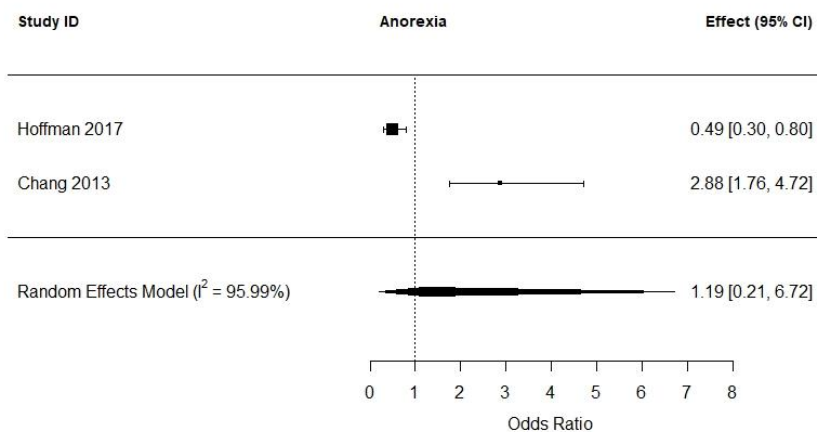




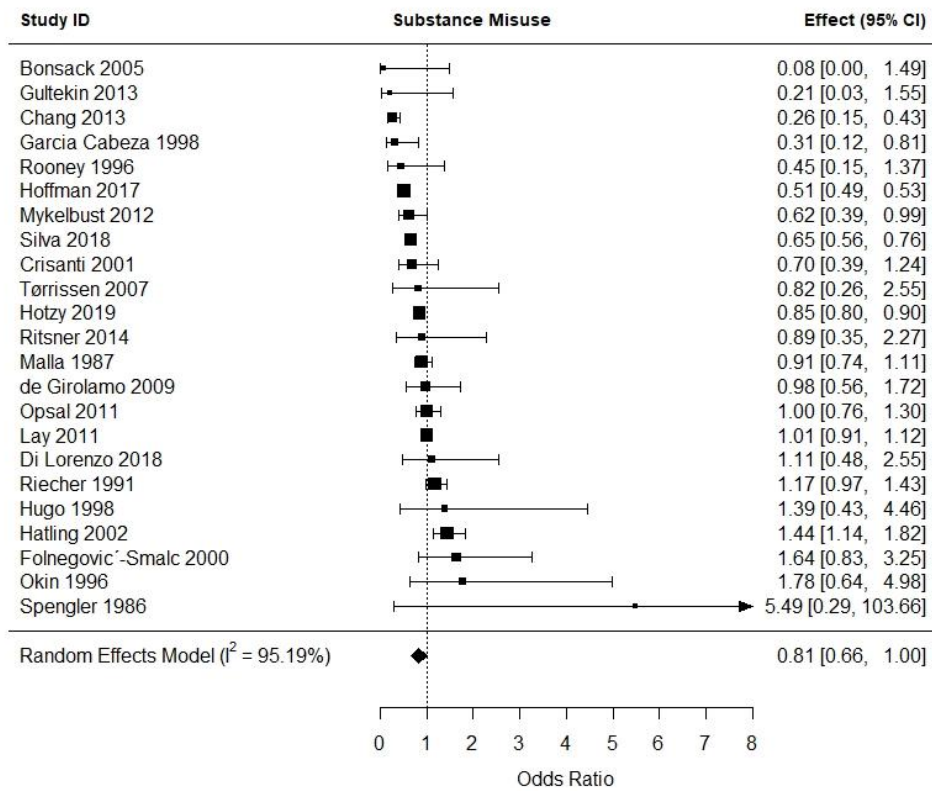
## Personality Disorder



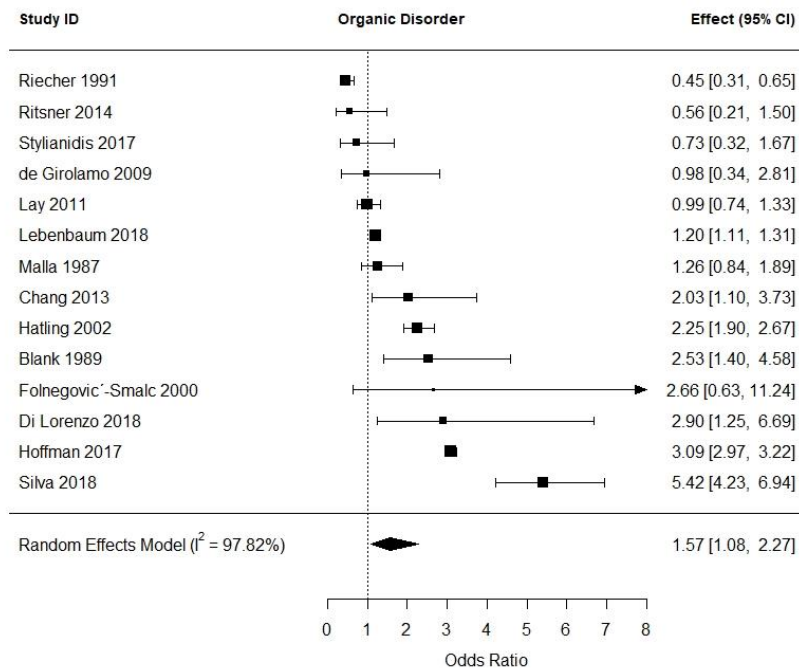
## Anorexia



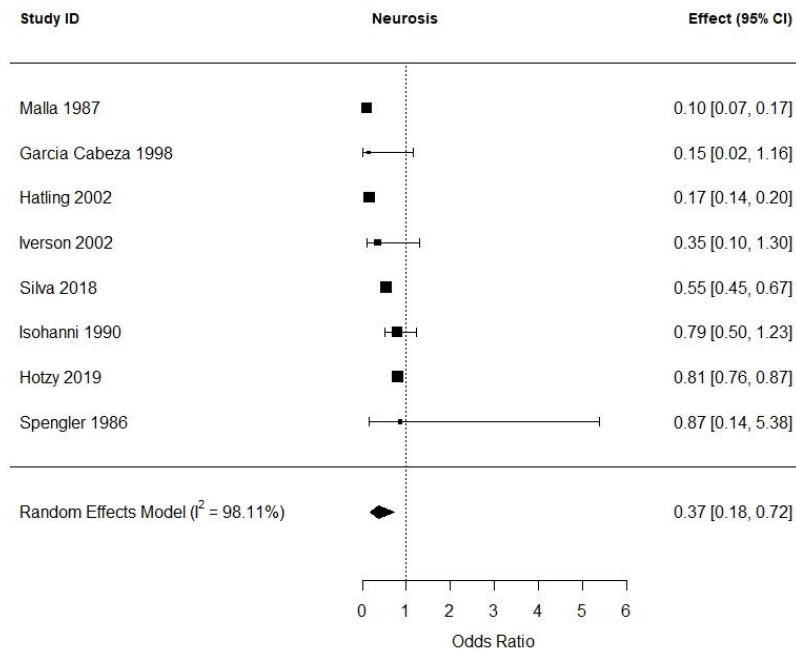
## Substance misuse



## Organic disorder

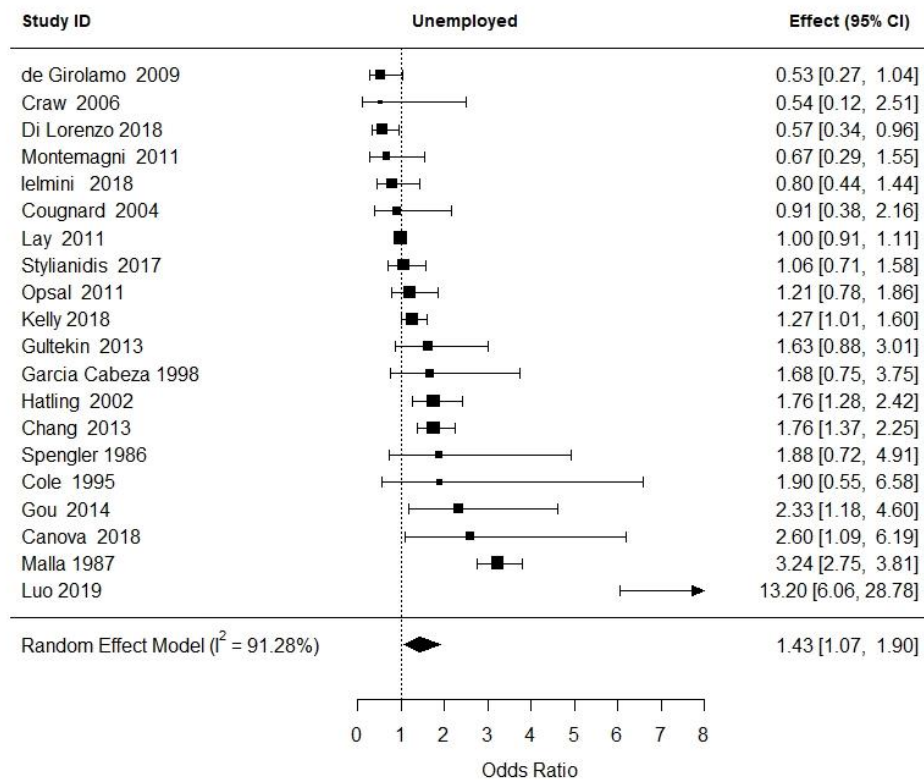


## Neurosis

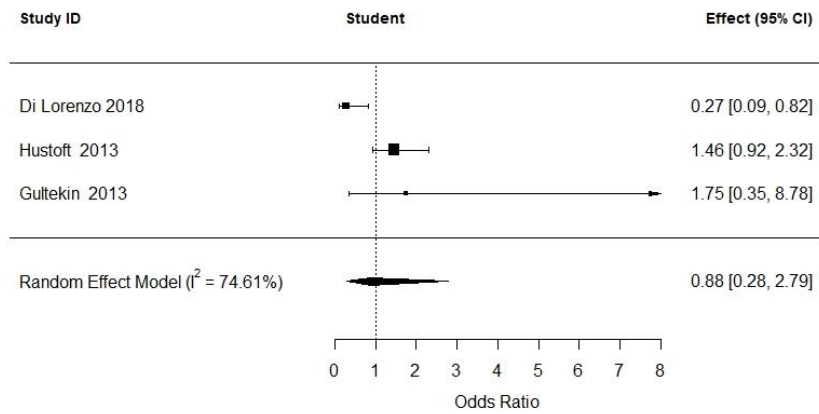


## EMPLOYMENT

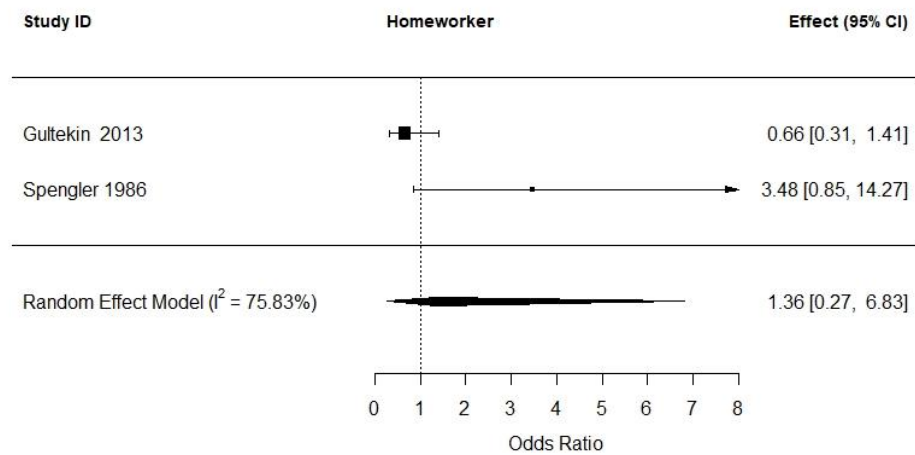
### Unemployment



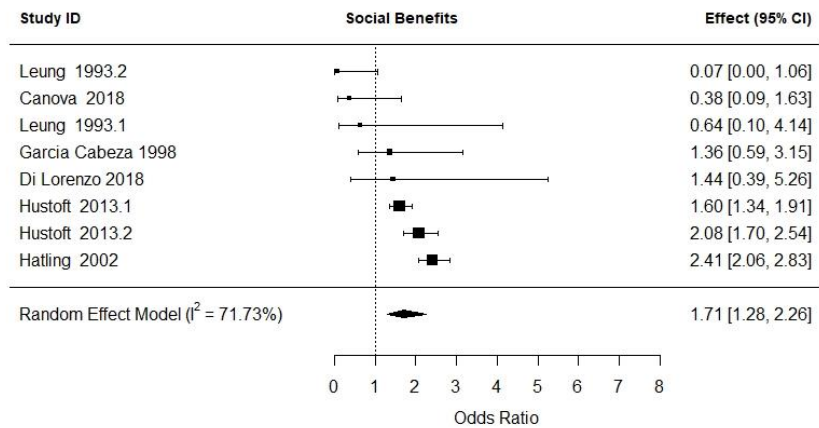
## Student



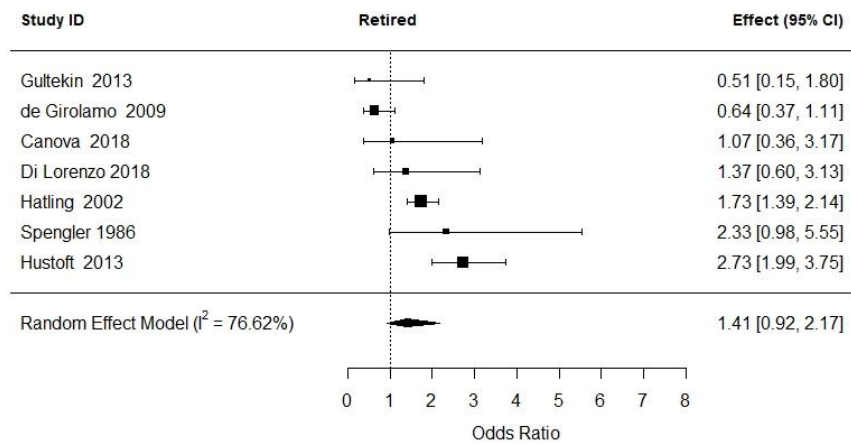
## Homeworker



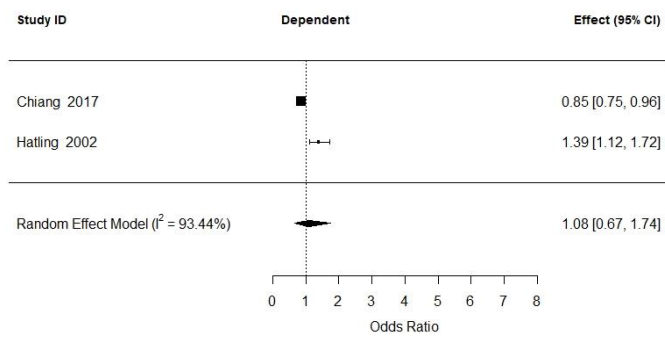
## Welfare Benefits



## Retired

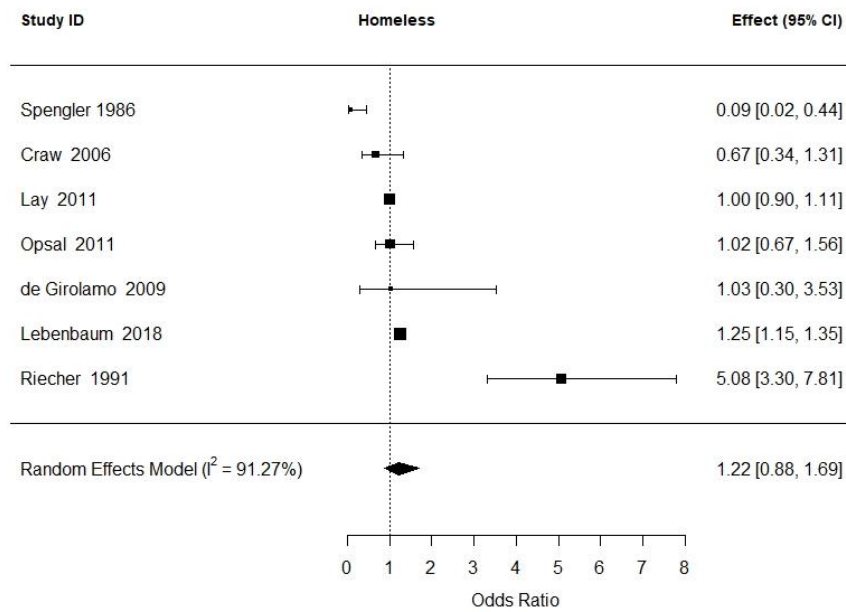


## Dependent

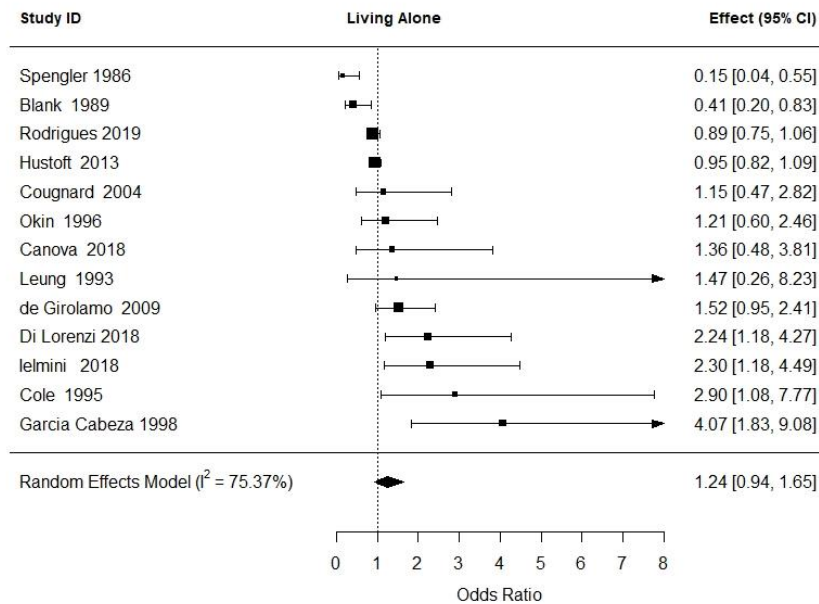


# HOUSING

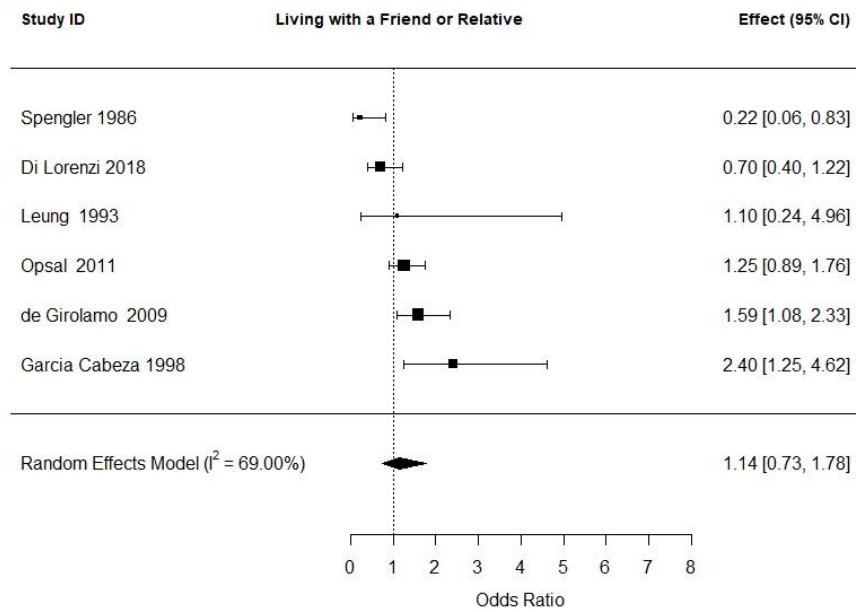
## Homeless



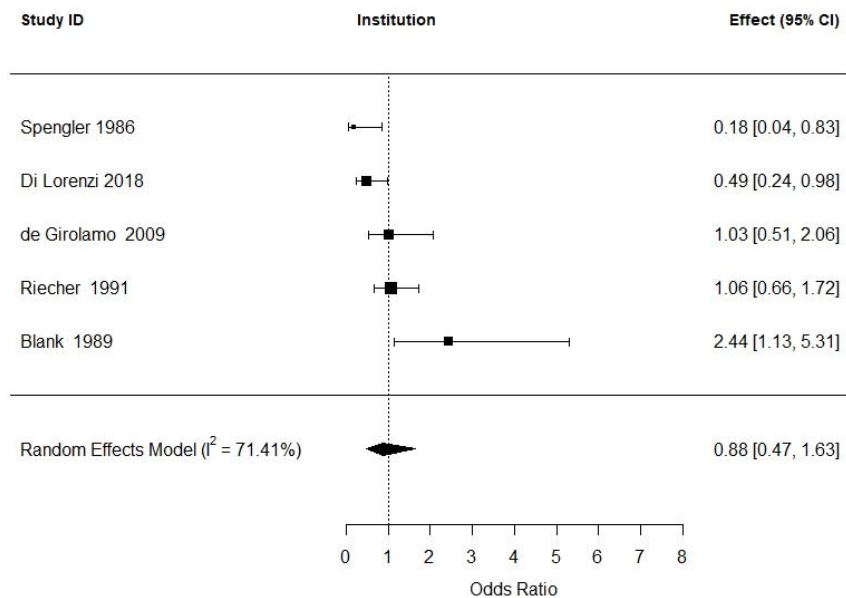
## Living Alone



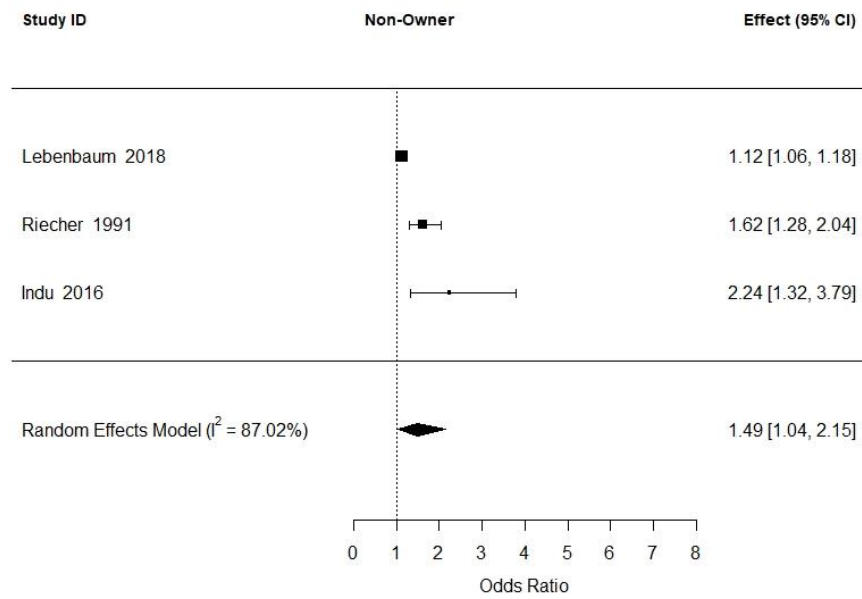
## Living with friend or relative



## Living in an institution



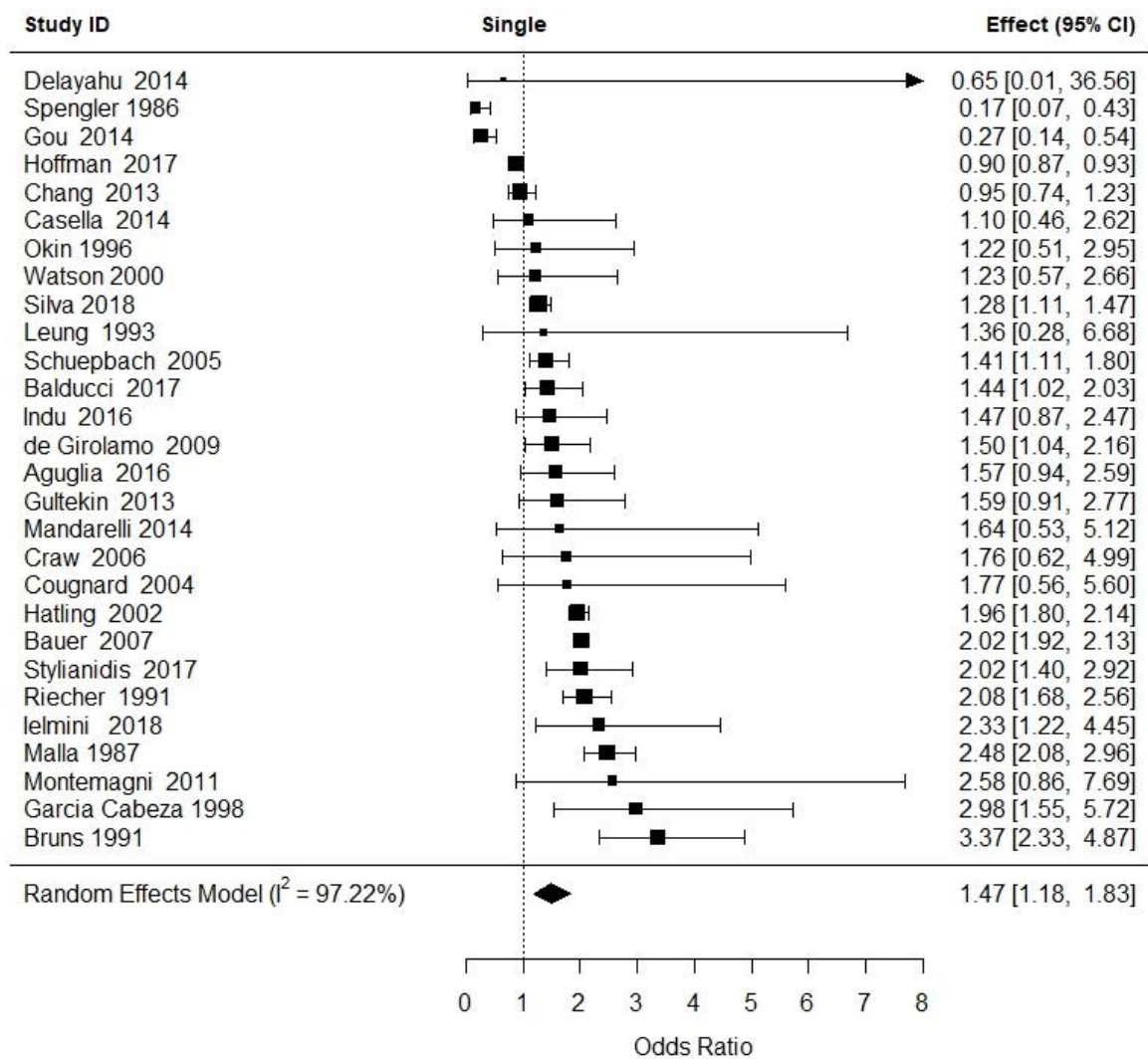
## Non-owner vs owner



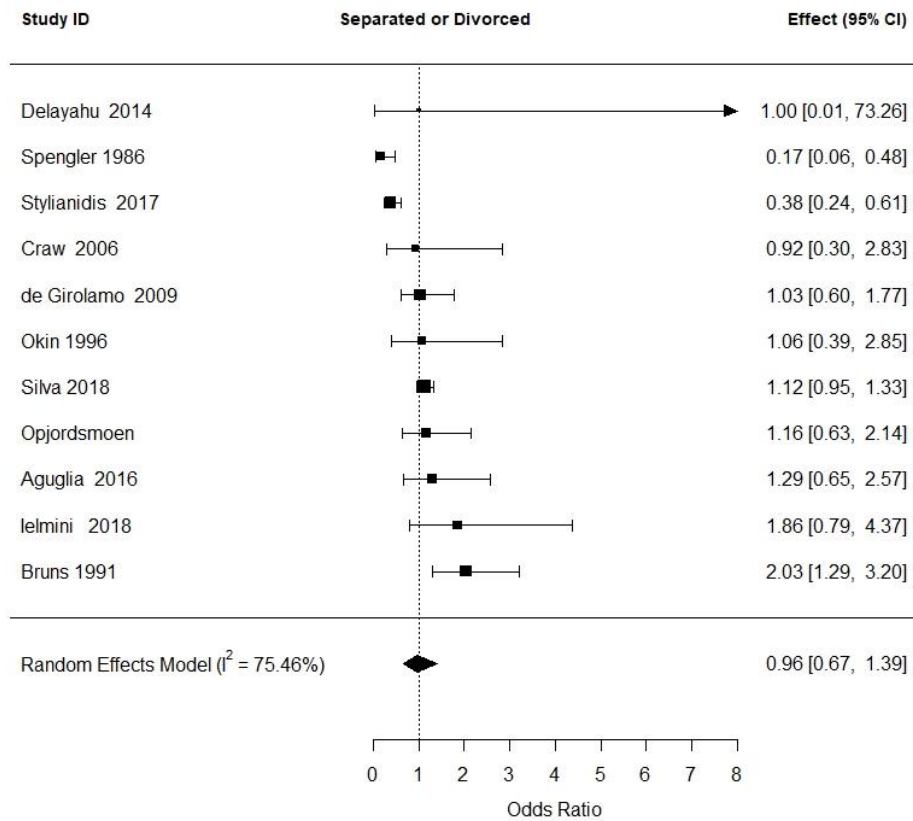


RELATIONSHIP STATUS

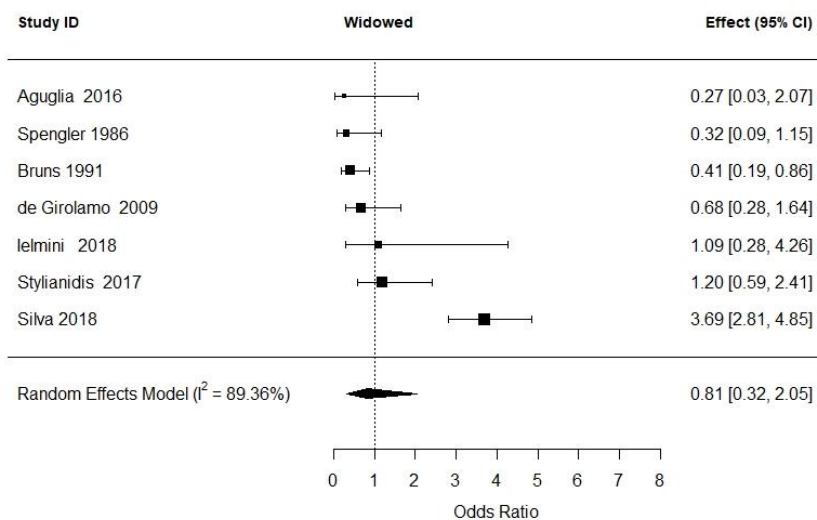
Single



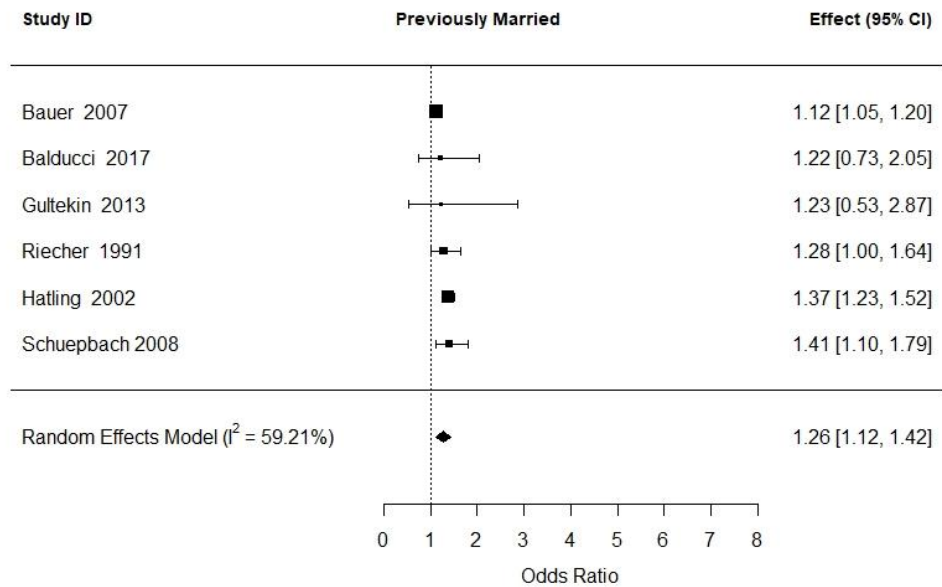
## Separated/divorced



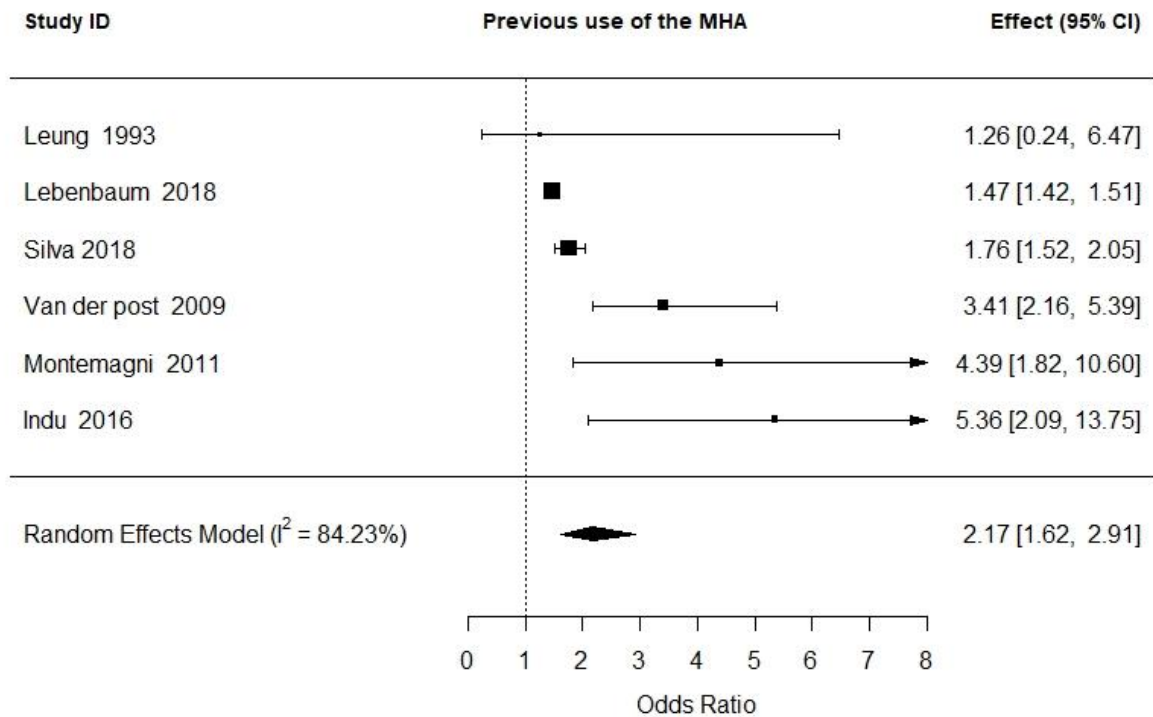
## Widowed



## Previously married



## PREVIOUS INVOLUNTARY ADMISSION



PREVIOUS ADMISSION

