Data supplement to Bonde et al. Risk of depressive disorder following disasters and military deployment: systematic review with meta-analysis. Br J Psychiatry doi: 10.1192/bjp.bp.114.157859

Literature search 1.1.1980 through 30.06.2014

Search

strings:

PubMed

search:

#1 Search (adult[MeSH Terms] and "english"[Language] and ("1980"[Date - Publication] : "2013"[Date - Publication])), N = 3.898.530 hits

#2 Search (depression/etiology[MeSH Terms] or depression/epidemiology[MeSH Terms] or depression or PTSD[ti] or mental[ti] or psychopathological[ti] or psychological[ti] or mood[ti]), N = 411.089 hits

#3 Search (disasters[MESH Terms] or (disaster[ti] or hurricane[ti] or earthquake[ti] or flood*[ti] or fireworks[ti] or terrorist[ti] or bombing*[ti] or "airplane crash"[ti] or refugee*[ti] or firefighter[ti] or police[ti] or war[ti] or veteran*[ti] or military[ti] or combat[ti] or deployed[ti] or soldier*[ti] or guard[ti])), N = 114.702 hits

#4 Search ("comparative study"[Publication Type] or cohort or follow-up or population-based or RR or OR AOR or HR or "comparative study"), N = 2.974.241 hits

#1 and #2 and #3 and #4, N = 995 hits

PsycINFO and Embase search:

#1 Search (disaster or catastrophe or accident or rescue worker or firefighter or combat or deployed or soldier or guard or trauma or injury), N = 105.532/1.171.387 hits

#2 Search (depression or depressi*.m_titl. Or mental.m_titl.), N = 257.059/449.376 hits

#3 Search (cross-sectional or follow-up or prospective or longitudinal), N = 191.561/1.753.533 hits

#4 Search (”relative risk” or ”hazard ratio” or ”odds ratio”), N = 15.798/225.638 hits

#5: #1 and #2 and #3 and #4, N = 88/334 hits

Table DS1 Risk of major depression or depressive symptoms according to disaster or military deployment in 23 epidemiological studies 1980-2014

Study	Event	*n*	Exposure		Outcome ascertainment	OR (95% CI)	Potential for		Incomplete Reporting[c]
			Contrast	Time since event, months			Bias[a]	Confoun -ding[b]	
Cohort studies									
Dlugosz *et al* (1999)[11,d]	Combat, US armed forces	1,775,236	Gulf War veterans *v.* non-deployed	<24	Hospitalisation, ICD-9 diagnoses, mood disturbance	0.77 (0.69–0.87)	No/Yes	No	0/7
Fullerton *et al* (2004)[12,d]	Airplane crash	628	Exposed disaster workers *v.* an unexposed comparison group	7 13	Zung Self-rating Depression Scale	1.63 (0.93–2.88) 1.73 (0.96–3.12)	No/No	No	0/7
Ginexi *et al* (1993)[13]	Midwest floods, Iowa	1,735	Self-reported flood impact *v.* no impact in representative State sample	2.5	Diagnostic Interview Schedule DSM-III, self- report	1.10 (1.02–1.18)	Yes/No	Yes	0/7
Henriksen *et al* (2010)[14,d]	WTC 9/11 attack, National Epidemiologic Survey on Alcohol and Related Conditions	34,653	Exposure to 9/11 terrorist attack *v.* no exposure: Indirectly exposed (television) Relatives involved Directly exposed	42	Alcohol Use Disorder and associated disabilities Diagnostic Schedule DSM IV: Mood disorders (not major depression)	 1.21 (1.06–1.39) 1.76 (1.38–2.25) 1.94 (0.95–3.98)	No/Yes	No	1/7
Ikin *et al* (2007)[15]	War, Australian Korea veterans		War veterans *v.* community comparison group	600	Hospital Anxiety and Depression Scale (HADS), self-report	5.45 (4.26–6.97)	Yes/No	No	0/7
Norris *et al* (2004)[16]	Mexico's 1999 flood	561	Severely affected civilians *v.* less severely affected	6	Depression module CIDI	2.61 (1.33–5.10)	No/Yes	Yes	2/7
O'Toole *et al* (2009)[17]	War, Australian Vietnam veterans	450	Deployed in the Vietnam war *v.* general age-matched male population	432	CICI-ICD 10 mood disorders (affective problems)	13.11 (11.6–14.7)	No/No	Yes	1/7
Seelig *et al* (2012)[18,d]	War, women in US millennium cohort study	17,481	Not-deployed (reference) Non-combat deployed Combat deployed	<36	PRIME-MD patient health questionnaire, DSM-IV	 0.77 (0.61–0.98) 1.55 (1.27–1.90)	No/Yes	No	1/7

Toomey *et al* (2007)[19,d]	Gulf War veterans	2,189	Deployed *v.* non-deployed	12 120	Composite International Diagnostic Interview CIDI, DSM- IV	1.81 (1.03–3.19) 3.71 (1.82–7.54)	No/Yes	No	1/7
Van der Velden *et al* (2006)[20]	Entscheden fireworks disaster, The Netherlands	1,188	Exposed *v.* a comparison group from another city	18 48	Depression Symptom Checklist-90-R	1.53 (1.17–2.00) 1.26 (0.98–1.70)	No/No	Yes	3/7
Wells *et al* (2010)[21,d]	War, men in US millennium cohort study	30,419	Not deployed (reference) Not combat deployed Combat deployed	<36	Self-report, Primary care evaluation of mental disorders, DSM-IV	0.66 (0.53–0.83) 1.32(1.13–1.54)	No/Yes	No	1/7
Case–control studies									
Armenian *et al* (2002)[22]	Earthquake Armenia 1988, residents	760	High-impact region *v.* low-impact regions (reference) Moderate High	2 years post disaster	National Institute of Mental Health Diagnostic Interview Schedule, DSM-III criteria, validated, trained interview	 1.6 (0.7–3.5) 5.9 (4.0–8.8)	No/Yes	Yes	3/7
Cross-sectional studies									
Basoglu *et al* (2005)[23]	War trauma in former Yugoslavia	1,038	War survivors (combat, torture, displacement and more) *v.* population controls	81	Structured Clinical Interview for DSM-IV	8.67 (3.69–20.37)	Yes/No	No	2/7
Cerda *et al* (2012)[24]	Haiti earthquake, population	1,044	Displaced in camps *v.* not displaced	2–3.5	Patient health questionnaire PHQ-9, validated	1.44 (1.09–1.91)	No/No	No	3/7
Gabriel *et al* (2007)[25]	Victims and policemen Madrid train bombings	765	Survivors and policemen *v.* general city population sample	2.5	Mini International Neuropsychiatric Interview, MINI, DSM-IV	4.98 (3.04–8.15) 0.14 (0.03–0.60)	No/No	Yes	0/7
Galea *et al* (2002)[10,d]	Residents Manhattan	1,008	Living near *v.* distant from WTC	1.5	Structured Clinical Interview for DSM-IV	1.86 (0.85–4.10) 1.20 (0.78–1.84)	No/Yes	No	1/7

Hoge et al (2006)[26,d]	Combat during deployment	3,03.905	Deployed in Iraq (high combat exposure) Deployed in Afghanistan (medium combat exposure) *v.* other military service (reference)	12	Personal Health Questionnaire PHQ-2	1.30 (1.16–1.45) 2.42 (2.28–2.57)	No/No	No	1/7
Kristensen *et al* (2009)[27]	Norwegian 2004 tsunami disaster	111	Bereaved Norwegians with and without tsunami exposure	24	MINI International Psychiatric Interview DSM-IV	2.96 (1.0–8.7)	Yes/No	No	2/7
Marshall *et al* (2005)[28,d]	Cambodian refugees	490	Number of trauma according to trauma event scale	Premigration trauma count Postmigration trauma count	Diagnostic interview by psychiatrist/psychologist	1.56 (1.24–1.97) 1.45 (1.12–1.86)	No/No	No	1/7
Miguel-Tobal *et al* (2006)[29]	General population Madrid	1,589	Direct witness to train bombings *v.* not	2	Structured Clinical Interview for DSM-III (SCID)	1.7 (1.0–3.0)	No/No	No	1/7
Rasmussen *et al* (2012)[30]	Conflict, US immigrants	3,260	Refugees *v.* voluntary immigrants	Before immigration After immigration	WMH-CIDI, 2.5 h interview, Mental Health Composite International Diagnostic Interview, DSM-IV criteria	1.98 (1.11–3.51) 1.02 (0.65–1.62)	Yes/No	No	2/7
Thomas *et al* (2010)[31]	War, US combat soldiers in Iraq	18,305	Active component *v.* National Guard soldiers	3 12	9-item Patient Health Questionnaire (PHQ-9), validated clinical scale for depression, DSM-IV criteria	1.70 (1.39–2.09) 1.18 (0.94–1.48)	Yes/No	Yes	1/7
Xiong *et al* (2010)[32]	Hurricane Katrina, pregnant women	301	Hurricane exposure with >3 events *v.* none	6	Edinburgh Depression Scale, 10 items self-report	3.3 (1.6–7.1)	Yes/No	Yes	3/7

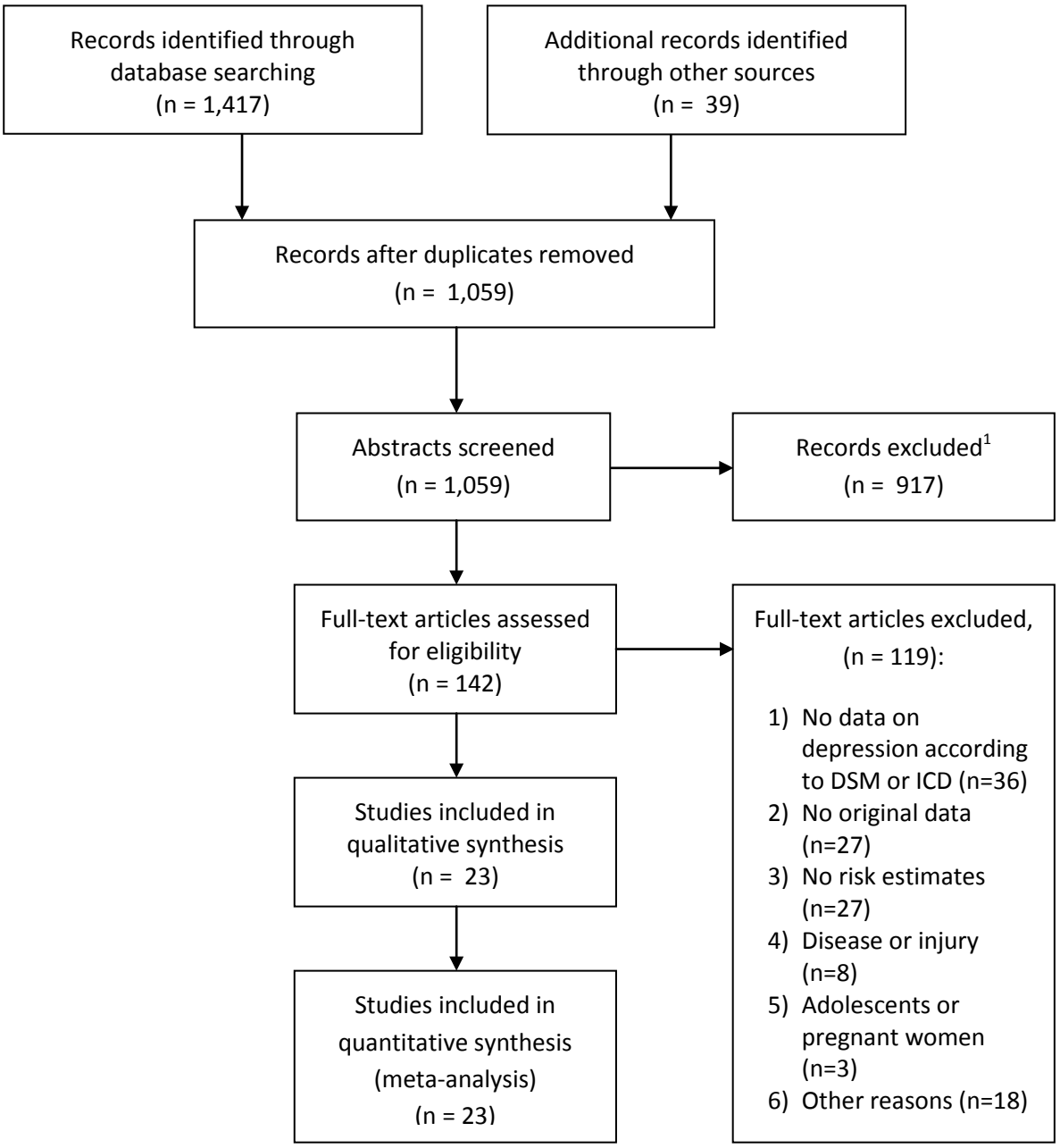
a. Bias distorting the risk estimate towards higher values (inflationary bias: recruitment selection and/or recall of exposure) in left column and bias distorting risk estimates towards lower values (deflationary bias: exposure misclassification and/or long time span since event) in right column

b. Confounding by gender, age and/or social class.

c. Number of items out of a list of 7 with incomplete or inadequate reporting.

d. Higher-quality study with complete reporting of at least 6 of 7 items and low risk of confounding and inflationary bias.

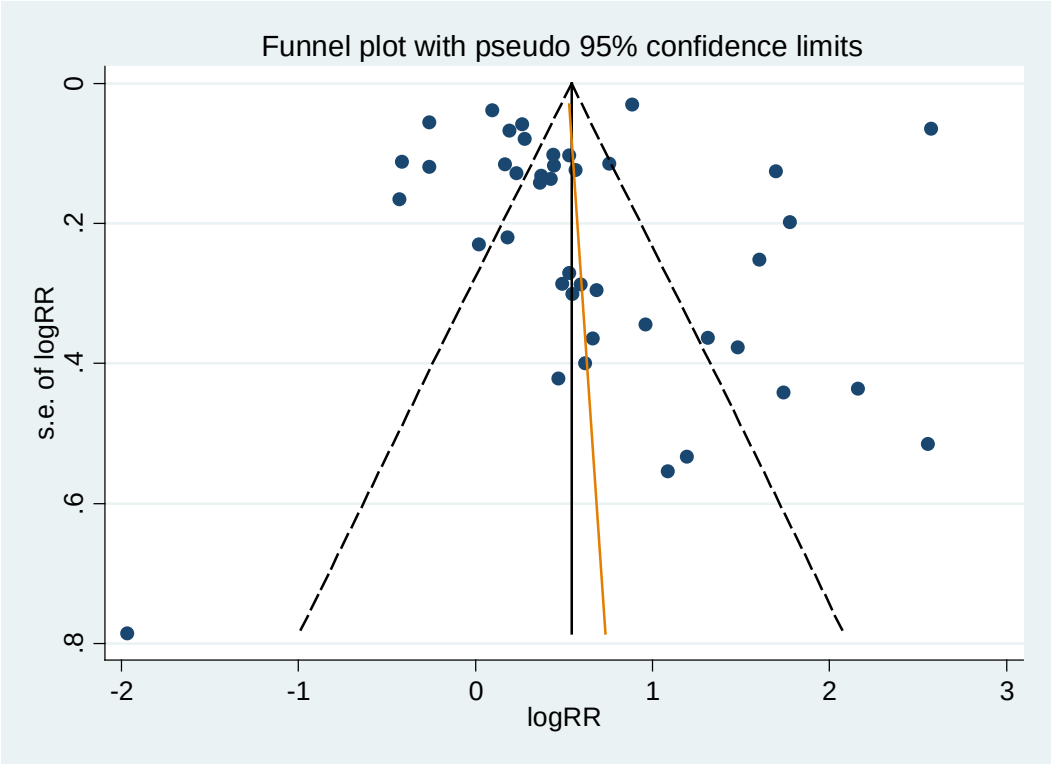
Fig. DS1 Flow diagram for the literature research according to the PRISMA 2009 criteria.



1) The method section specifies inclusion/exclusion criteria

Fig DS2 Funnel plot of precision (standard error of the logarithm of the odds ratio) versus risk estimate (40). A: All studies, n=23; B: Higher quality studies, n=9

(a)



(b)