THE LANCET
Planetary Health

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: Munro A, Kovats RS, Rubin GJ, et al. Effect of evacuation and displacement on the association between flooding and mental health outcomes: a cross-sectional analysis of UK survey data. *Lancet Planetary Health* 2017; published online June 19. http://dx.doi.org/10.1016/S2542-5196(17)30047-5.

E-Appendix A: Core code for Flood-displacement analyses

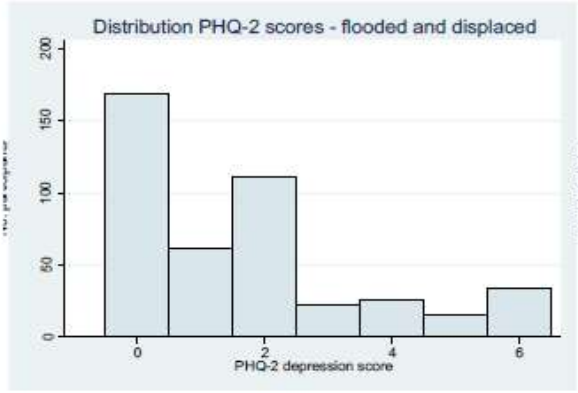
This demonstrates analyses for the depression score (depscore) and it binary version dep01.
We have attempted to make variable names recognisable as shortened forms of names used in the paper (esp. Table 1).

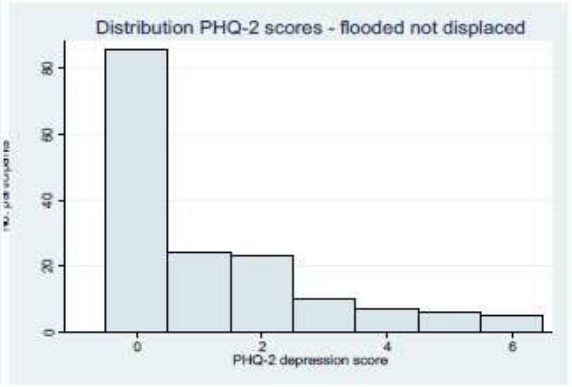
```
global confounder_terms ///
"i.sex i.agegp i.education i.disability i.maritalstatus i.employment i.housingten i.localauth
i.area_depriv"


// ORDINAL ANALYSIS
// Displacement
ologit depscore i.displaced ${confounder_terms}

// Duration (the variable duration has 4 levels, of which the first is non-displaced
//          and the next three are durations of displacement if displaced  )
ologit depscore i.duration_new ${confounder_terms}
contrast {duration_new  0 -0.5 0 0.5}  // to test trend in displaced only

// Amount of warning (Three levels; defined for all subjects, whether displaced or not.)
ologit depscore  i.amountwarning i.amountwarning#i.displaced ${confounder_terms}
contrast {i.amountwarning#i.displaced 0 -0.5 0 0 0 0.5}  // test trend in warning modification


// SECONDARY AND SENSITIVITY ANALYSES

//BINARY LOGISTIC (replace ologit by logistic)

// TEST FOR INTERACTIONS (demonstrated for age group)
ologit depscore i.displaced ${confounder_terms} i.agegp#i.displaced
testparm i.agegp#i.displaced

//  ALLOW FOR CLUSTERING BY LSOA
// Add "vce(cluster lsoa)"  as option for ologit

// ADJUSTING FOR FLOOD SEVERITY VARIABLES
// Add  "i.depth  i.durfl i.resume" as model terms


// TEST FOR PROPRTIONAL ODDS

// A: OF ALL TERMS (compare ologit likelihood with that of multinomial, equiv to
///              all-term non-proportional odd model)
ologit depscore i.displaced ${confounder_terms}
estimates store O
xi: mlogit depscore i.displaced  ${confounder_terms}
estimates store M
```

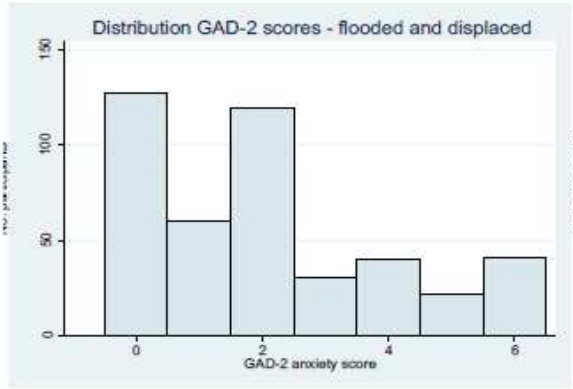
```
lrtest O M, force  // force option required because stata does not "know" that mlogit lik is
//                 comparable to ologit lik

// B: FOR DISPLACEMENT SPECIFICALLY
gologit2 depscore i.displaced ${confounder_terms}  , npl(1.displaced) force
estimates store PPO
lrtest PPO O , force
```

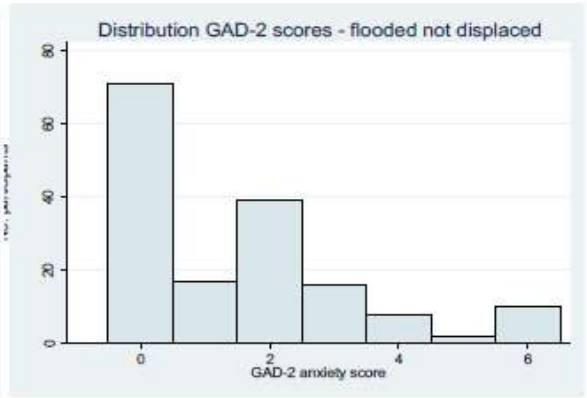
EAppendix B: Secondary and sensitivity analyses

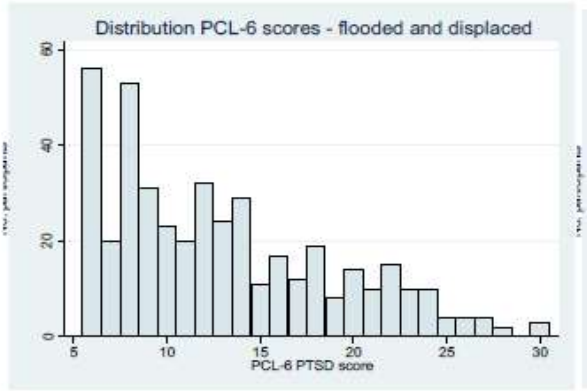
B1 Distribution of outcome scores

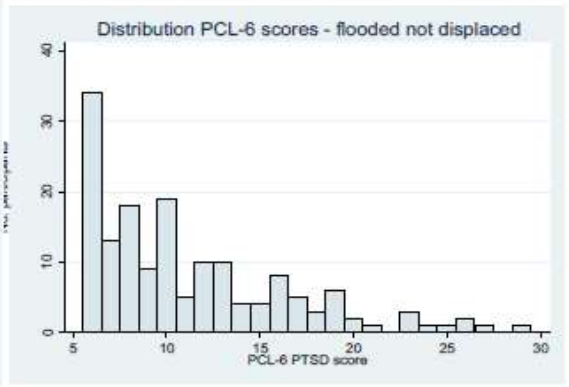












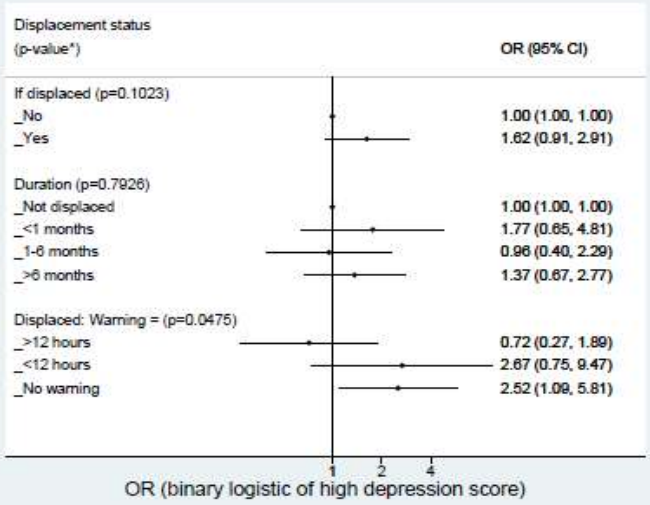
B2 Tests for proportional odds

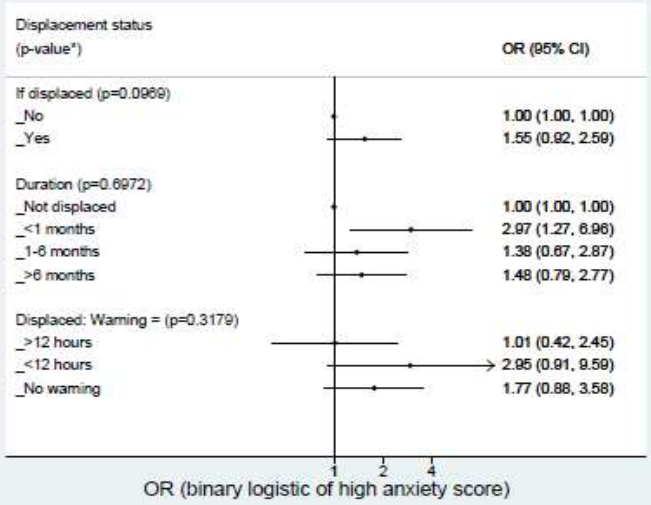
```
dep  (n=567,  567)
LR test of proportional odds for displacement
Likelihood-ratio test                                 LR chi2(5)  =      6.11
(Assumption: O nested in PPO)                         Prob > chi2 =    0.2953

LR test of proportional odds for all covariates (n.iter=14)
Likelihood-ratio test                                 LR chi2(148)=    165.60
(Assumption: O nested in M)                           Prob > chi2 =    0.1531


anx  (n=570,  570)
LR test of proportional odds for displacement
Likelihood-ratio test                                 LR chi2(5)  =      7.63
(Assumption: O nested in PPO)                         Prob > chi2 =    0.1778

LR test of proportional odds for all covariates (n.iter=13)
Likelihood-ratio test                                 LR chi2(149)=    175.69
(Assumption: O nested in M)                           Prob > chi2 =    0.0667


PTSD  (n=565,  565)
LR test of proportional odds for displacement
Likelihood-ratio test                                 LR chi2(4)  =      0.84
(Assumption: O nested in PPO)                         Prob > chi2 =    0.9328

LR test of proportional odds for all covariates (n.iter=100)
Likelihood-ratio test                                 LR chi2(117)=    118.07
(Assumption: O nested in M)                           Prob > chi2 =    0.4550
```

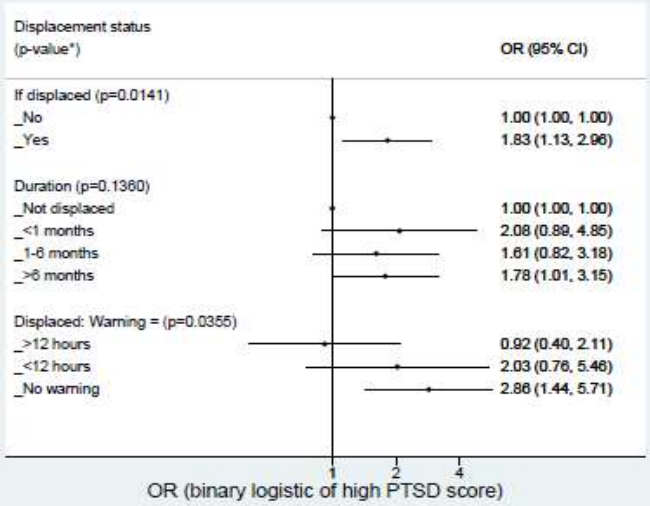
B3 Tests for modification of displacement effect (interactions)

Outcome	Putative modifier	p-int(df)
dep	i.sex	0.9872(df=1)
dep	i.agegp	0.4064(df=3)
dep	i.education	0.8372(df=3)
dep	i.disability	0.0610(df=1)
dep	i.maritalstatus	0.0958(df=3)
dep	i.employmentnew	0.0651(df=5)
dep	i.housingtenure	0.9511(df=3)
dep	i.localauth	0.4827(df=5)
dep	i.eng_lsoa2	0.6997(df=3)
anx	i.sex	0.9533(df=1)
anx	i.agegp	0.1600(df=3)
anx	i.education	0.2384(df=3)
anx	i.disability	0.9687(df=1)
anx	i.maritalstatus	0.1147(df=3)
anx	i.employmentnew	0.0951(df=5)
anx	i.housingtenure	0.9355(df=3)
anx	i.localauth	0.8972(df=5)
anx	i.eng_lsoa2	0.6181(df=3)
PTSD	i.sex	0.5150(df=1)
PTSD	i.agegp	0.6023(df=3)
PTSD	i.education	0.9444(df=3)
PTSD	i.disability	0.2622(df=1)
PTSD	i.maritalstatus	0.3604(df=4)
PTSD	i.employmentnew	0.1200(df=5)
PTSD	i.housingtenure	0.0383(df=3)
PTSD	i.localauth	0.4476(df=5)
PTSD	i.eng_lsoa2	0.4598(df=3)

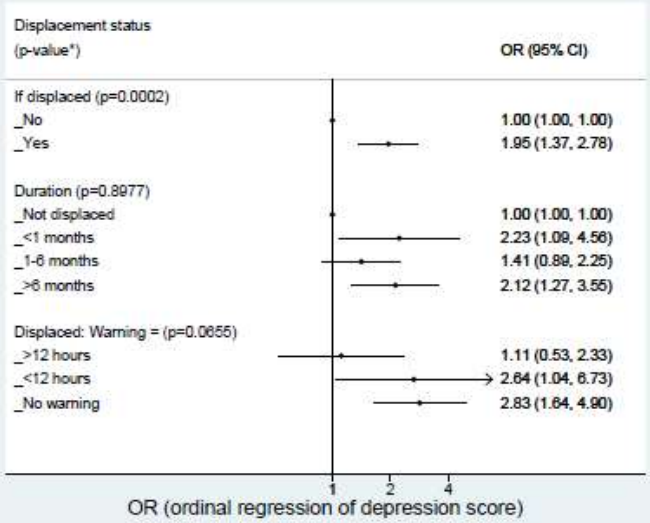
B4 Primary results using standard binary logistic regression.

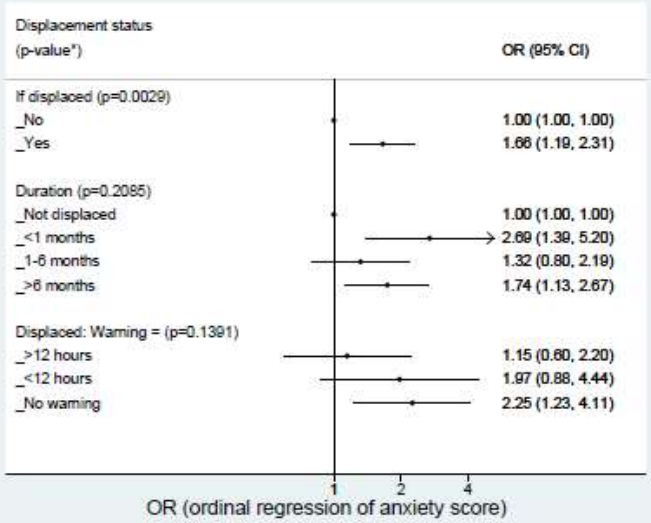


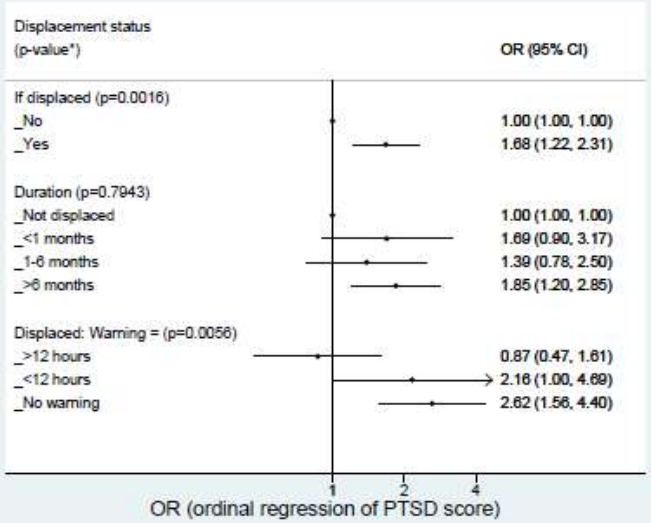
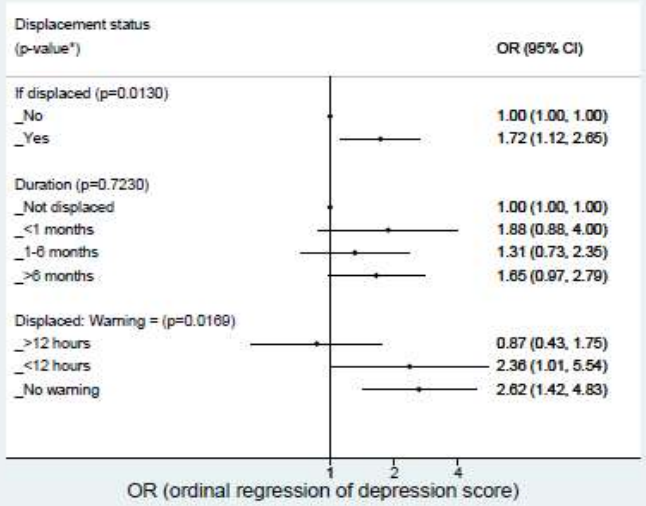
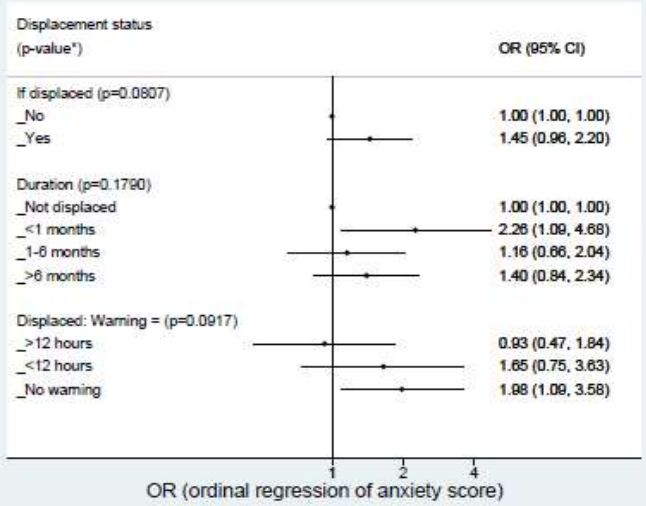
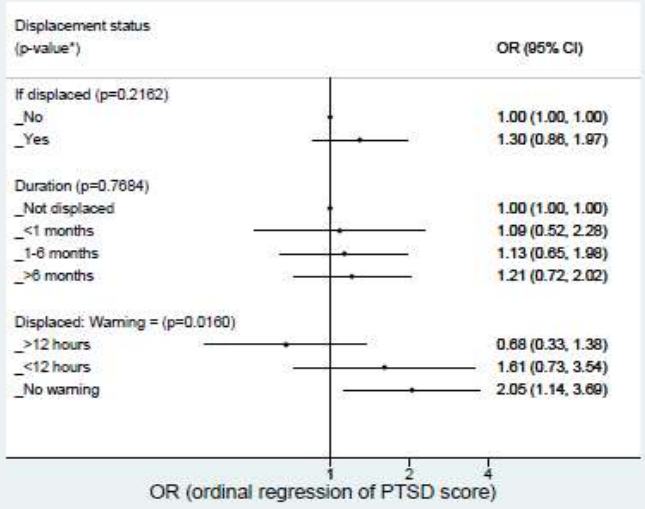




B5 Primary results allowing for clustering by Lower Level Super Output Area







B6 Primary results adjusting for possible confounding by severity of flooding.