```
 1 .
 2 . use "E:\16GBBACKUPUSB\BACKUP_USB_SEPTEMBER2014\May Baydoun_folder\UK_BIOBANK_PROJECT\UKB_PAPER8E_ADPRSPROTDEM\D

 3 .
 4 . **Main exposures of interest: LE8* infectionburden viralinfectionburden bacterialinfectionburden
 5 . **Main outcomes of interest: Dementia and AD
 6 . **Main covariates: AGE SEX RACE_ETHN (or Non_White) educationbr townsend householdincome householdsize
 7 . **Main effect modifiers: sex and race
 8 .
 9 .
10 .
11 . capture drop zLE8*

12 . foreach x of varlist LE8* {
     2.         egen z`x'=std(`x') if sample_final==1
     3. }
   (72 missing values generated)
   (362 missing values generated)
   (197 missing values generated)
   (5,063 missing values generated)
   (2,016 missing values generated)
   (2,396 missing values generated)
   (1 missing value generated)
   (31 missing values generated)
   (1 missing value generated)
   (1 missing value generated)

13 .
14 .
15 .
16 . capture drop zLE8_LIFESTYLE

17 . capture drop zLE8_BIOLOGICAL

18 . egen zLE8_LIFESTYLE=std(LE8_LIFESTYLE) if sample_final==1

19 . egen zLE8_BIOLOGICAL=std(LE8_BIOLOGICAL) if sample_final==1
   (31 missing values generated)

20 .
21 .
22 . capture drop zLE8_LIFESTYLEinv

23 . capture drop zLE8_BIOLOGICALinv

24 . gen zLE8_LIFESTYLEinv=zLE8_LIFESTYLE*-1

25 . gen zLE8_BIOLOGICALinv=zLE8_LIFESTYLE*-1

26 .
```

```
27 .
28 .
29 . capture drop zLE8_TOTALSCOREinv

30 . gen zLE8_TOTALSCOREinv=zLE8_TOTALSCORE*-1
   (1 missing value generated)

31 .
32 .
33 . capture drop AD_PGStert

34 . xtile AD_PGStert=AD_PGS if sample_final==1, nq(3)

35 .
36 .
37 . capture drop NonWhite

38 . gen NonWhite=.
   (40,139 missing values generated)

39 . replace NonWhite=RACE_ETHN
   (40,139 real changes made)

40 . recode NonWhite (0=0) (1=1) (2=1) (3=1)
   (1,423 changes made to NonWhite)

41 .
42 . capture drop LE8_TOTALSCOREtertinv

43 . gen LE8_TOTALSCOREtertinv=.
   (40,139 missing values generated)

44 . replace LE8_TOTALSCOREtertinv=1 if LE8_TOTALSCOREtert==3
   (13,311 real changes made)

45 . replace LE8_TOTALSCOREtertinv=2 if LE8_TOTALSCOREtert==2
   (12,856 real changes made)

46 . replace LE8_TOTALSCOREtertinv=3 if LE8_TOTALSCOREtert==1
   (13,971 real changes made)

47 .
48 .
49 . capture drop Agesq

50 . gen Agesq=AGE*AGE

51 .
52 . save, replace
   file E:\16GBBACKUPUSB\BACKUP_USB_SEPTEMBER2014\May Baydoun_folder\UK_BIOBANK_PROJECT\UKB_PAPER8E_ADPRSPROTDEM\DAT
```

```
53 .
54 .
55 .
56 . *****************AGE and SEX*********************************
57 .
58 . **********TABLE 1: OVERALL, BY SEX AND BY RACE ***************
59 .
60 . ****OVERALL**
61 .
62 . foreach x1 of varlist AGE Agesq PC1-PC20 AD_PGS    {
     2.          mean `x1' if sample_final==1
     3. }
```

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
AGE	**60.85048**	**.0275161**	**60.79654**	**60.90441**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
Agesq	**3733.17**	**3.322327**	**3726.659**	**3739.682**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC1	**-1.902049**	**.2687028**	**-2.428713**	**-1.375385**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC2	**1.401258**	**.1211092**	**1.163881**	**1.638635**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC3	**-.172438**	**.065218**	**-.3002667**	**-.0446093**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC4	**.1131923**	**.052277**	**.0107283**	**.2156564**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC5	**-.0549561**	**.0379465**	**-.1293321**	**.0194198**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC6	**-.1344097**	**.0207047**	**-.1749914**	**-.0938279**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC7	**.0467748**	**.0250243**	**-.0022735**	**.0958231**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC8	**-.0830672**	**.0225227**	**-.1272123**	**-.0389222**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC9	**.0984616**	**.0223115**	**.0547305**	**.1421927**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC10	**.0179788**	**.0201777**	**-.0215699**	**.0575276**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC11	**.1161172**	**.0202848**	**.0763585**	**.155876**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC12	**.0240945**	**.0187531**	**-.0126621**	**.0608511**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC13	**.0308531**	**.0149811**	**.0014899**	**.0602163**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC14	**.0237796**	**.0167293**	**-.0090103**	**.0565694**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC15	**.0189666**	**.0164797**	**-.0133339**	**.0512672**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC16	**.0187892**	**.0159408**	**-.012455**	**.0500335**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC17	**.0235781**	**.0131809**	**-.0022567**	**.049413**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC18	**.0374299**	**.0143479**	**.0093076**	**.0655521**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC19	**-.0095422**	**.0141069**	**-.037192**	**.0181077**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
PC20	**.0119912**	**.0140367**	**-.0155211**	**.0395034**

Mean estimation Number of obs = **40,139**

	Mean	Std. err.	[95% conf. interval]	
AD_PGS	**.0647612**	**.0050592**	**.054845**	**.0746775**

```
63 .
64 .
65 .
66 . foreach x2 of varlist dem_diag ad_diag SEX NonWhite RACE_ETHN  AD_PGStert {
  2.          prop `x2' if sample_final==1
  3. }
```

Proportion estimation Number of obs = **40,139**

	Proportion	Std. err.	Logit [95% conf.	interval]
dem_diag				
0	**.970926**	**.0008386**	**.9692365**	**.9725254**
1	**.029074**	**.0008386**	**.0274746**	**.0307635**

Proportion estimation Number of obs = **40,139**

	Proportion	Std. err.	Logit [95% conf.	interval]
ad_diag				
0	**.9865717**	**.0005745**	**.9853978**	**.9876524**
1	**.0134283**	**.0005745**	**.0123476**	**.0146022**

Proportion estimation Number of obs = **40,139**

	Proportion	Std. err.	Logit [95% conf.	interval]
SEX				
1	**.4625178**	**.0024886**	**.4576437**	**.467399**
2	**.5374822**	**.0024886**	**.532601**	**.5423563**

Proportion estimation Number of obs = **40,139**

	Proportion	Std. err.	Logit [95% conf.	interval]
NonWhite				
0	.9489026	.0010991	.9467049	.9510143
1	.0510974	.0010991	.0489857	.0532951

Proportion estimation Number of obs = **40,139**

	Proportion	Std. err.	Logit [95% conf.	interval]
RACE_ETHN				
0	.9489026	.0010991	.9467049	.9510143
1	.0156456	.0006194	.0144768	.0169072
2	.015247	.0006116	.0140935	.0164934
3	.0202048	.0007023	.0188733	.0216282

Proportion estimation Number of obs = **40,139**

	Proportion	Std. err.	Logit [95% conf.	interval]
AD_PGStert				
1	.3333416	.002353	.3287459	.3379693
2	.3333416	.002353	.3287459	.3379693
3	.3333167	.0023529	.328721	.3379443

```
67 .
68 .
69 . **Among Men**
70 .
71 . foreach x1 of varlist AGE Agesq PC1-PC20 AD_PGS  {
  2.          mean `x1' if sample_final==1 & SEX==1
  3. }
```

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf.	interval]
AGE	61.13478	.0405994	61.05521	61.21436

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf.	interval]
Agesq	3768.061	4.911475	3758.434	3777.688

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC1	**-2.563325**	**.3781268**	**-3.304489**	**-1.822162**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC2	**1.386196**	**.1697053**	**1.053558**	**1.718834**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC3	**.1760519**	**.0947731**	**-.0097121**	**.3618159**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC4	**.0664714**	**.0788822**	**-.0881449**	**.2210878**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC5	**-.0529502**	**.0555623**	**-.1618573**	**.055957**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC6	**-.2145441**	**.0252743**	**-.264084**	**-.1650043**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC7	**.199521**	**.0378116**	**.1254069**	**.2736351**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC8	**-.1035829**	**.0313396**	**-.1650113**	**-.0421545**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC9	**.0867221**	**.0328445**	**.0223438**	**.1511004**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC10	**.0325535**	**.0320089**	**-.0301868**	**.0952939**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC11	**.1529098**	**.0317384**	**.0906996**	**.2151201**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC12	**.0603712**	**.0301658**	**.0012434**	**.119499**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC13	**.0238535**	**.0178994**	**-.0112309**	**.0589379**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC14	**.0253703**	**.0246185**	**-.0228843**	**.0736249**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC15	**.0681263**	**.0235931**	**.0218815**	**.114371**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC16	**-.0325366**	**.0235954**	**-.0787857**	**.0137126**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC17	**.0003947**	**.0189056**	**-.036662**	**.0374514**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC18	**.0491443**	**.0210587**	**.0078673**	**.0904213**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC19	**-.003894**	**.020741**	**-.0445482**	**.0367603**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
PC20	**.0242878**	**.0206661**	**-.0162197**	**.0647952**

Mean estimation Number of obs = **18,565**

	Mean	Std. err.	[95% conf. interval]	
AD_PGS	**.0721395**	**.007491**	**.0574564**	**.0868226**

```
72 .
73 .
74 .
75 . foreach x2 of varlist dem_diag ad_diag  NonWhite RACE_ETHN AD_PGStert    {
     2.          prop `x2' if sample_final==1 & SEX==1
     3. }
```

Proportion estimation Number of obs = **18,565**

	Proportion	Std. err.	Logit [95% conf.	interval]
dem_diag				
0	**.9668193**	**.0013145**	**.9641438**	**.9693015**
1	**.0331807**	**.0013145**	**.0306985**	**.0358562**

Proportion estimation Number of obs = **18,565**

	Proportion	Std. err.	Logit [95% conf.	interval]
ad_diag				
0	**.9865877**	**.0008443**	**.9848281**	**.9881456**
1	**.0134123**	**.0008443**	**.0118544**	**.0151719**

Proportion estimation Number of obs = **18,565**

	Proportion	Std. err.	Logit [95% conf.	interval]
NonWhite				
0	**.9493671**	**.0016091**	**.9461185**	**.9524297**
1	**.0506329**	**.0016091**	**.0475703**	**.0538815**

Proportion estimation Number of obs = **18,565**

	Proportion	Std. err.	Logit [95% conf.	interval]
RACE_ETHN				
0	**.9493671**	**.0016091**	**.9461185**	**.9524297**
1	**.0144896**	**.000877**	**.0128674**	**.0163131**
2	**.0175061**	**.0009625**	**.015716**	**.019496**
3	**.0186372**	**.0009926**	**.0167881**	**.0206857**

Proportion estimation Number of obs = **18,565**

	Proportion	Std. err.	Logit [95% conf.	interval]
AD_PGStert				
1	**.3330999**	**.0034592**	**.3263545**	**.3399144**
2	**.3324535**	**.0034575**	**.3257116**	**.3392648**
3	**.3344465**	**.0034626**	**.3276941**	**.3412675**

```
. 
. **Among Women**
. 
. foreach x1 of varlist AGE Agesq PC1-PC20 AD_PGS  {
  2.          mean `x1' if sample_final==1 & SEX==2
  3. }
```

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
AGE	**60.60582**	**.0373409**	**60.53263**	**60.67901**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
Agesq	**3703.146**	**4.500653**	**3694.324**	**3711.967**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC1	**-1.333003**	**.3795061**	**-2.076863**	**-.5891432**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC2	**1.414219**	**.1716011**	**1.077868**	**1.75057**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC3	**-.4723229**	**.089797**	**-.6483317**	**-.296314**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC4	**.1533969**	**.069659**	**.0168601**	**.2899337**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC5	**-.0566823**	**.0519469**	**-.158502**	**.0451374**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC6	**-.0654518**	**.0317877**	**-.127758**	**-.0031456**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC7	**-.0846673**	**.0332761**	**-.149891**	**-.0194436**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC8	**-.065413**	**.0320729**	**-.1282782**	**-.0025478**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC9	**.1085638**	**.0304036**	**.0489704**	**.1681572**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC10	**.0054369**	**.025508**	**-.0445607**	**.0554345**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC11	**.0844562**	**.0260451**	**.0334059**	**.1355065**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC12	**-.0071227**	**.0233121**	**-.052816**	**.0385707**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC13	**.0368764**	**.0232304**	**-.0086569**	**.0824098**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC14	**.0224107**	**.0228037**	**-.0222863**	**.0671077**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC15	**-.0233365**	**.0229727**	**-.0683646**	**.0216916**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC16	**.0629564**	**.021614**	**.0205914**	**.1053214**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC17	**.043528**	**.0183494**	**.0075619**	**.0794942**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC18	**.0273493**	**.0196016**	**-.0110713**	**.0657699**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC19	**-.0144026**	**.0192438**	**-.0521218**	**.0233166**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
PC20	**.0014096**	**.0191252**	**-.0360772**	**.0388964**

Mean estimation Number of obs = **21,574**

	Mean	Std. err.	[95% conf. interval]	
AD_PGS	**.058412**	**.006859**	**.0449678**	**.0718562**

```
80 .
81 .
82 .
83 . foreach x2 of varlist dem_diag ad_diag  NonWhite RACE_ETHN  AD_PGStert   {
  2.          prop `x2' if sample_final==1 & SEX==2
  3.
84 . }
```

Proportion estimation Number of obs = **21,574**

	Proportion	Std. err.	Logit [95% conf. interval]	
dem_diag				
0	**.97446**	**.0010741**	**.9722681**	**.9764828**
1	**.02554**	**.0010741**	**.0235172**	**.0277319**

Proportion estimation Number of obs = **21,574**

	Proportion	Std. err.	Logit [95% conf. interval]	
ad_diag				
0	**.9865579**	**.000784**	**.9849313**	**.9880111**
1	**.0134421**	**.000784**	**.0119889**	**.0150687**

Proportion estimation Number of obs = **21,574**

	Proportion	Std. err.	Logit [95% conf. interval]	
NonWhite				
0	**.9485028**	**.0015047**	**.9454724**	**.9513735**
1	**.0514972**	**.0015047**	**.0486265**	**.0545276**

Proportion estimation Number of obs = **21,574**

	Proportion	Std. err.	Logit [95% conf. interval]	
RACE_ETHN				
0	**.9485028**	**.0015047**	**.9454724**	**.9513735**
1	**.0166404**	**.0008709**	**.0150167**	**.0184364**
2	**.013303**	**.00078**	**.0118577**	**.0149219**
3	**.0215537**	**.0009887**	**.0196987**	**.0235793**

Proportion estimation Number of obs = **21,574**

	Proportion	Std. err.	Logit [95% conf.	interval]
AD_PGStert				
1	**.3335496**	**.00321**	**.3272878**	**.3398707**
2	**.3341059**	**.0032113**	**.3278413**	**.3404295**
3	**.3323445**	**.003207**	**.3260886**	**.3386601**

```
85 .
86 .
87 . **Difference by sex**
88 .
89 .
90 . foreach x1 of varlist AGE Agesq PC1-PC20 AD_PGS  {
  2.          reg `x1' SEX if sample_final==1
  3. }
```

Source	SS	df	MS		
				Number of obs	= **40,139**
				F(1, 40137)	= **92.08**
Model	**2791.94952**	**1**	**2791.94952**	Prob > F	= **0.0000**
Residual	**1217024.68**	**40,137**	**30.3217649**	R-squared	= **0.0023**
				Adj R-squared	= **0.0023**
Total	**1219816.63**	**40,138**	**30.3905682**	Root MSE	= **5.5065**

AGE	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	**-.5289617**	**.0551249**	**-9.60**	**0.000**	**-.6370078**	**-.4209157**
_cons	**61.66375**	**.0890987**	**692.08**	**0.000**	**61.48911**	**61.83838**

Source	SS	df	MS		
				Number of obs	= **40,139**
				F(1, 40137)	= **95.13**
Model	**42048800.7**	**1**	**42048800.7**	Prob > F	= **0.0000**
Residual	**1.7741e+10**	**40,137**	**442011.962**	R-squared	= **0.0024**
				Adj R-squared	= **0.0023**
Total	**1.7783e+10**	**40,138**	**443048.556**	Root MSE	= **664.84**

Agesq	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	**-64.91533**	**6.655604**	**-9.75**	**0.000**	**-77.96047**	**-51.87019**
_cons	**3832.977**	**10.7575**	**356.31**	**0.000**	**3811.892**	**3854.061**

Source	SS	df	MS		
				Number of obs	= **40,139**
				F(1, 40137)	= **5.21**
Model	**15104.1638**	**1**	**15104.1638**	Prob > F	= **0.0224**
Residual	**116308156**	**40,137**	**2897.77902**	R-squared	= **0.0001**
				Adj R-squared	= **0.0001**
Total	**116323261**	**40,138**	**2898.08313**	Root MSE	= **53.831**

PC1	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	**1.230322**	**.5388937**	**2.28**	**0.022**	**.174078**	**2.286566**
_cons	**-3.793647**	**.8710174**	**-4.36**	**0.000**	**-5.500862**	**-2.086433**

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	0.01
Model	7.8362207	1	7.8362207	Prob > F	=	0.9082
Residual	23630690.1	40,137	588.75078	R-squared	=	0.0000
				Adj R-squared	=	-0.0000
Total	23630697.9	40,138	588.736307	Root MSE	=	24.264

PC2	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	.0280236	.2429049	0.12	0.908	-.4480755	.5041227
_cons	1.358172	.3926087	3.46	0.001	.5886501	2.127694

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	24.58
Model	4194.80042	1	4194.80042	Prob > F	=	0.0000
Residual	6848426.58	40,137	170.626269	R-squared	=	0.0006
				Adj R-squared	=	0.0006
Total	6852621.38	40,138	170.726528	Root MSE	=	13.062

PC3	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.6483748	.1307656	-4.96	0.000	-.9046783	-.3920712
_cons	.8244267	.2113572	3.90	0.000	.4101616	1.238692

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	0.69
Model	75.3968342	1	75.3968342	Prob > F	=	0.4071
Residual	4402867.25	40,137	109.695972	R-squared	=	0.0000
				Adj R-squared	=	-0.0000
Total	4402942.64	40,138	109.695118	Root MSE	=	10.474

PC4	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	.0869255	.1048494	0.83	0.407	-.1185817	.2924326
_cons	-.020454	.1694687	-0.12	0.904	-.3526166	.3117086

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	0.00
Model	.138985754	1	.138985754	Prob > F	=	0.9609
Residual	2319877.21	40,137	57.7989687	R-squared	=	0.0000
				Adj R-squared	=	-0.0000
Total	2319877.35	40,138	57.7975322	Root MSE	=	7.6026

PC5	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0037321	.076108	-0.05	0.961	-.1529056	.1454414
_cons	-.049218	.1230139	-0.40	0.689	-.2903281	.1918921

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	12.89
Model	221.804073	1	221.804073	Prob > F	=	0.0003
Residual	690434.729	40,137	17.2019515	R-squared	=	0.0003
				Adj R-squared	=	0.0003
Total	690656.533	40,138	17.207049	Root MSE	=	4.1475

PC6	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	.1490923	.0415202	3.59	0.000	.0677118	.2304728
_cons	-.3636364	.0671094	-5.42	0.000	-.4951723	-.2321005

Source	SS	df	MS		
Model	805.88219	1	805.88219	Number of obs	40,139
Residual	1008093.25	40,137	25.1163079	F(1, 40137)	32.09
Total	1008899.13	40,138	25.1357599	Prob > F	0.0000
				R-squared	0.0008
				Adj R-squared	0.0008
				Root MSE	5.0116

PC7	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.2841883	.0501705	-5.66	0.000	-.3825237	-.185853
_cons	.4837094	.0810909	5.97	0.000	.3247693	.6426494

Source	SS	df	MS		
Model	14.5378452	1	14.5378452	Number of obs	40,139
Residual	817253.681	40,137	20.3616035	F(1, 40137)	0.71
Total	817268.219	40,138	20.3614584	Prob > F	0.3981
				R-squared	0.0000
				Adj R-squared	-0.0000
				Root MSE	4.5124

PC8	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	.0381699	.0451727	0.84	0.398	-.0503698	.1267095
_cons	-.1417527	.073013	-1.94	0.052	-.2848599	.0013544

Source	SS	df	MS		
Model	4.7602766	1	4.7602766	Number of obs	40,139
Residual	802006.862	40,137	19.9817341	F(1, 40137)	0.24
Total	802011.623	40,138	19.9813549	Prob > F	0.6255
				R-squared	0.0000
				Adj R-squared	-0.0000
				Root MSE	4.4701

PC9	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	.0218417	.0447494	0.49	0.625	-.0658681	.1095515
_cons	.0648804	.0723287	0.90	0.370	-.0768856	.2066463

Source	SS	df	MS		
Model	7.33721363	1	7.33721363	Number of obs	40,139
Residual	655934.315	40,137	16.3423852	F(1, 40137)	0.45
Total	655941.652	40,138	16.3421609	Prob > F	0.5028
				R-squared	0.0000
				Adj R-squared	-0.0000
				Root MSE	4.0426

PC10	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0271167	.0404695	-0.67	0.503	-.1064379	.0522046
_cons	.0596702	.0654112	0.91	0.362	-.0685372	.1878776

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	2.83
Model	46.7576322	1	46.7576322	Prob > F	=	0.0925
Residual	662879.576	40,137	16.5154241	R-squared	=	0.0001
				Adj R-squared	=	0.0000
Total	662926.334	40,138	16.5161775	Root MSE	=	4.0639

PC11	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0684537	.0406832	-1.68	0.092	-.1481937	.0112864
_cons	.2213635	.0657566	3.37	0.001	.0924791	.3502479

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	3.22
Model	45.4556547	1	45.4556547	Prob > F	=	0.0727
Residual	566546.633	40,137	14.1153208	R-squared	=	0.0001
				Adj R-squared	=	0.0001
Total	566592.089	40,138	14.1161017	Root MSE	=	3.757

PC12	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0674939	.0376111	-1.79	0.073	-.1412125	.0062247
_cons	.1278651	.060791	2.10	0.035	.0087133	.2470169

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	0.19
Model	1.69229931	1	1.69229931	Prob > F	=	0.6647
Residual	361581.194	40,137	9.00867514	R-squared	=	0.0000
				Adj R-squared	=	-0.0000
Total	361582.886	40,138	9.00849286	Root MSE	=	3.0014

PC13	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	.0130229	.030047	0.43	0.665	-.0458698	.0719157
_cons	.0108306	.0485651	0.22	0.824	-.0843582	.1060194

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	0.01
Model	.087404475	1	.087404475	Prob > F	=	0.9297
Residual	450898.038	40,137	11.2339746	R-squared	=	0.0000
				Adj R-squared	=	-0.0000
Total	450898.126	40,138	11.2336969	Root MSE	=	3.3517

PC14	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0029596	.0335534	-0.09	0.930	-.0687252	.0628059
_cons	.02833	.0542327	0.52	0.601	-.0779673	.1346272

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	7.66
Model	83.4733183	1	83.4733183	Prob > F	=	0.0057
Residual	437459.259	40,137	10.8991519	R-squared	=	0.0002
				Adj R-squared	=	0.0002
Total	437542.732	40,138	10.90096	Root MSE	=	3.3014

PC15	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0914628	.0330496	-2.77	0.006	-.1562408	-.0266847
_cons	.159589	.0534184	2.99	0.003	.0548878	.2642902

Source	SS	df	MS		
Model	90.9917289	1	90.9917289	Number of obs	= 40,139
Residual	409301.762	40,137	10.1976172	F(1, 40137)	= 8.92
Total	409392.754	40,138	10.1996301	Prob > F	= 0.0028
				R-squared	= 0.0002
				Adj R-squared	= 0.0002
				Root MSE	= 3.1934

PC16	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	.095493	.0319683	2.99	0.003	.0328343	.1581516
_cons	-.1280295	.0516706	-2.48	0.013	-.2293051	-.026754

Source	SS	df	MS		
Model	18.5645662	1	18.5645662	Number of obs	= 40,139
Residual	279887.352	40,137	6.97330026	F(1, 40137)	= 2.66
Total	279905.917	40,138	6.97358904	Prob > F	= 0.1028
				R-squared	= 0.0001
				Adj R-squared	= 0.0000
				Root MSE	= 2.6407

PC17	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	.0431333	.0264356	1.63	0.103	-.0086811	.0949478
_cons	-.0427386	.0427281	-1.00	0.317	-.1264866	.0410094

Source	SS	df	MS		
Model	4.73996136	1	4.73996136	Number of obs	= 40,139
Residual	331661.083	40,137	8.26322553	F(1, 40137)	= 0.57
Total	331665.823	40,138	8.26313775	Prob > F	= 0.4488
				R-squared	= 0.0000
				Adj R-squared	= -0.0000
				Root MSE	= 2.8746

PC18	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.021795	.028777	-0.76	0.449	-.0781986	.0346085
_cons	.0709394	.0465124	1.53	0.127	-.0202261	.1621048

Source	SS	df	MS		
Model	1.10192729	1	1.10192729	Number of obs	= 40,139
Residual	320614.683	40,137	7.98800815	F(1, 40137)	= 0.14
Total	320615.785	40,138	7.98783659	Prob > F	= 0.7103
				R-squared	= 0.0000
				Adj R-squared	= -0.0000
				Root MSE	= 2.8263

PC19	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0105087	.0282937	-0.37	0.710	-.065965	.0449477
_cons	.0066147	.0457313	0.14	0.885	-.0830197	.0962491

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	0.66
Model	5.22277322	1	5.22277322	Prob > F	=	0.4164
Residual	317428.123	40,137	7.90861608	R-squared	=	0.0000
				Adj R-squared	=	-0.0000
Total	317433.346	40,138	7.90854916	Root MSE	=	2.8122

PC20	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0228782	.0281527	-0.81	0.416	-.0780582	.0323019
_cons	.0471659	.0455035	1.04	0.300	-.0420219	.1363538

Source	SS	df	MS	Number of obs	=	40,139
				F(1, 40137)	=	1.83
Model	1.88036166	1	1.88036166	Prob > F	=	0.1761
Residual	41235.7297	40,137	1.02737449	R-squared	=	0.0000
				Adj R-squared	=	0.0000
Total	41237.6101	40,138	1.02739574	Root MSE	=	1.0136

AD_PGS	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
SEX	-.0137275	.0101469	-1.35	0.176	-.0336157	.0061607
_cons	.085867	.0164006	5.24	0.000	.0537215	.1180125

```
91 .
92 .
93 .
94 . foreach x2 of varlist dem_diag ad_diag  NonWhite RACE_ETHN  AD_PGStert   {
     2.          mlogit `x2' SEX if sample_final==1
     3.
95 . }

Iteration 0:  Log likelihood = -5278.6119
Iteration 1:  Log likelihood = -5268.3727
Iteration 2:  Log likelihood = -5268.3305
Iteration 3:  Log likelihood = -5268.3305

Multinomial logistic regression                       Number of obs = 40,139
                                                      LR chi2(1)    =  20.56
                                                      Prob > chi2   = 0.0000
Log likelihood = -5268.3305                           Pseudo R2     = 0.0019
```

dem_diag	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
0	(base outcome)					
1						
SEX	-.2695948	.0595108	-4.53	0.000	-.3862339	-.1529557
_cons	-3.102448	.0926219	-33.50	0.000	-3.283983	-2.920912

```
Iteration 0:  Log likelihood =  -2858.664
Iteration 1:  Log likelihood = -2858.6636
Iteration 2:  Log likelihood = -2858.6636
```

Multinomial logistic regression — Number of obs = **40,139**
LR chi2(**1**) = **0.00**
Prob > chi2 = **0.9794**
Log likelihood = **-2858.6636** — Pseudo R2 = **0.0000**

ad_diag	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
0	(base outcome)					
1						
SEX	**.0022474**	**.0869823**	**0.03**	**0.979**	**-.1682348**	**.1727296**
_cons	**-4.300325**	**.1406339**	**-30.58**	**0.000**	**-4.575962**	**-4.024687**

Iteration 0: Log likelihood = **-8097.4005**
Iteration 1: Log likelihood = **-8097.3236**
Iteration 2: Log likelihood = **-8097.3236**

Multinomial logistic regression — Number of obs = **40,139**
LR chi2(**1**) = **0.15**
Prob > chi2 = **0.6949**
Log likelihood = **-8097.3236** — Pseudo R2 = **0.0000**

NonWhite	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
0	(base outcome)					
1						
SEX	**.0178359**	**.045492**	**0.39**	**0.695**	**-.0713269**	**.1069987**
_cons	**-2.94903**	**.0736969**	**-40.02**	**0.000**	**-3.093473**	**-2.804586**

Iteration 0: Log likelihood = **-10333.245**
Iteration 1: Log likelihood = **-10323.923**
Iteration 2: Log likelihood = **-10323.891**
Iteration 3: Log likelihood = **-10323.891**

Multinomial logistic regression — Number of obs = **40,139**
LR chi2(**3**) = **18.71**
Prob > chi2 = **0.0003**
Log likelihood = **-10323.891** — Pseudo R2 = **0.0009**

RACE_ETHN	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
0	(base outcome)					
1						
SEX	**.139311**	**.0812933**	**1.71**	**0.087**	**-.0200209**	**.2986428**
_cons	**-4.321673**	**.1339075**	**-32.27**	**0.000**	**-4.584127**	**-4.059219**
2						
SEX	**-.273643**	**.0816508**	**-3.35**	**0.001**	**-.4336756**	**-.1136104**
_cons	**-3.719605**	**.126759**	**-29.34**	**0.000**	**-3.968048**	**-3.471162**
3						
SEX	**.1462986**	**.0717378**	**2.04**	**0.041**	**.005695**	**.2869022**
_cons	**-4.076933**	**.1182669**	**-34.47**	**0.000**	**-4.308732**	**-3.845135**

```
Iteration 0:  Log likelihood = -44097.199
Iteration 1:  Log likelihood = -44097.089
Iteration 2:  Log likelihood = -44097.089

Multinomial logistic regression                     Number of obs = 40,139
                                                    LR chi2(2)    =   0.22
                                                    Prob > chi2   = 0.8958
Log likelihood = -44097.089                         Pseudo R2     = 0.0000
```

AD_PGStert	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
1	(base outcome)					
2						
SEX	.0036086	.0245241	0.15	0.883	-.0444577	.0516749
_cons	-.005551	.0396563	-0.14	0.889	-.0832758	.0721739
3						
SEX	-.0076542	.0245194	-0.31	0.755	-.0557113	.0404029
_cons	.0116887	.0396168	0.30	0.768	-.0659588	.0893363

```
 96 .
 97 .
 98 . save, replace
file E:\16GBBACKUPUSB\BACKUP_USB_SEPTEMBER2014\May Baydoun_folder\UK_BIOBANK_PROJECT\UKB_PAPER8E_ADPRSPROTDEM\DAT

 99 .
100 .
101 .
102 . capture log close
```