---

name: **<unnamed>**
log: **E:\16GBBACKUPUSB\BACKUP_USB_SEPTEMBER2014\May Baydoun_folder\HANDLS_PAPER64_HCYDEPANXIETY_LONG\OUTPU**
log type: **smcl**
opened on: **21 Jun 2024, 07:05:40**

```
. 
. 
. ////////////////////////////////////FIGURE 4: HCY AT V1 VS. CES-D, TOTAL POPULATION//////////////////////
> 
. 
. 
. use finaldata_imputed_FINAL, clear

. 
. 
. mi extract 1

. save final_imputed_one, replace
file final_imputed_one.dta saved

. 
. 
. mixed CES  c.timew1w3w4##c.w1Agecent48 c.timew1w3w4##Sex c.timew1w3w4##Race  c.timew1w3w4##PovStat  c.timew1w3w
> c.timew1w3w4##c.Lnw1HCyscenter2p15   ///
> if sample4obs==1 || HNDID: timew1w3w4, cov(un)
note: timew1w3w4 omitted because of collinearity.
note: timew1w3w4 omitted because of collinearity.
note: timew1w3w4 omitted because of collinearity.
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note: timew1w3w4 omitted because of collinearity.

Performing EM optimization ...

Performing gradient-based optimization:
Iteration 0:  Log likelihood = -14702.939
Iteration 1:  Log likelihood = -14690.165
Iteration 2:  Log likelihood = -14689.447
Iteration 3:  Log likelihood = -14689.423
Iteration 4:  Log likelihood = -14689.423

Computing standard errors ...

Mixed-effects ML regression                     Number of obs     =      4,015
Group variable: HNDID                           Number of groups  =      1,460
                                                Obs per group:
                                                              min =          1
                                                              avg =        2.8
                                                              max =          3
                                                Wald chi2(13)     =     132.91
Log likelihood = -14689.423                     Prob > chi2       =     0.0000
```

CES	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
timew1w3w4	-.2047729	.0636709	-3.22	0.001	-.3295656	-.0799803
w1Agecent48	-.1151419	.0311402	-3.70	0.000	-.1761756	-.0541082
c.timew1w3w4#c.w1Agecent48	.0016888	.0037025	0.46	0.648	-.005568	.0089457
timew1w3w4	0	(omitted)				
Sex						
Men	-2.689832	.5868451	-4.58	0.000	-3.840027	-1.539637
Sex#c.timew1w3w4						
Men	.076229	.0690236	1.10	0.269	-.0590548	.2115129
timew1w3w4	0	(omitted)				
Race						
AfrAm	-1.536724	.5642869	-2.72	0.006	-2.642706	-.4307419
Race#c.timew1w3w4						
AfrAm	.0923091	.067164	1.37	0.169	-.0393299	.223948
timew1w3w4	0	(omitted)				
PovStat						
Below	4.21449	.5830406	7.23	0.000	3.071751	5.357228
PovStat#c.timew1w3w4						
Below	-.0062584	.0677059	-0.09	0.926	-.1389595	.1264427
timew1w3w4	0	(omitted)				
invmillsCES	-.0064565	.0251931	-0.26	0.798	-.055834	.042921
c.timew1w3w4#c.invmillsCES	-.0019818	.002776	-0.71	0.475	-.0074227	.0034591
timew1w3w4	0	(omitted)				
Lnw1HCyscenter2p15	2.337214	.9024688	2.59	0.010	.5684075	4.10602
c.timew1w3w4#c.Lnw1HCyscenter2p15	-.1150114	.1078054	-1.07	0.286	-.3263061	.0962833
_cons	14.87527	.5222086	28.49	0.000	13.85176	15.89878

Random-effects parameters	Estimate	Std. err.	[95% conf.	interval]
HNDID: Unstructured				
var(timew1w3w4)	.0383962	.0716793	.0009891	1.490527
var(_cons)	68.83117	4.438145	60.65977	78.10332
cov(timew1w3w4,_cons)	-.5124959	.4419071	-1.378618	.353626
var(Residual)	50.5337	1.936237	46.87774	54.47478

LR test vs. linear model: chi2(3) = **1103.77** Prob > chi2 = **0.0000**

Note: LR test is conservative and provided only for reference.

```
14 .
15 . margins, at(c.timew1w3w4=(0(1)13) c.Lnw1HCyscenter2p15=(-1(1)1))

Predictive margins                                      Number of obs = 4,015

Expression: Linear prediction, fixed portion, predict()
1._at:  timew1w3w4       =  0
        Lnw1HCyscente~15 = -1
2._at:  timew1w3w4       =  0
        Lnw1HCyscente~15 =  0
3._at:  timew1w3w4       =  0
        Lnw1HCyscente~15 =  1
4._at:  timew1w3w4       =  1
        Lnw1HCyscente~15 = -1
5._at:  timew1w3w4       =  1
        Lnw1HCyscente~15 =  0
6._at:  timew1w3w4       =  1
        Lnw1HCyscente~15 =  1
7._at:  timew1w3w4       =  2
        Lnw1HCyscente~15 = -1
8._at:  timew1w3w4       =  2
        Lnw1HCyscente~15 =  0
9._at:  timew1w3w4       =  2
        Lnw1HCyscente~15 =  1
10._at: timew1w3w4       =  3
        Lnw1HCyscente~15 = -1
11._at: timew1w3w4       =  3
        Lnw1HCyscente~15 =  0
12._at: timew1w3w4       =  3
        Lnw1HCyscente~15 =  1
13._at: timew1w3w4       =  4
        Lnw1HCyscente~15 = -1
14._at: timew1w3w4       =  4
        Lnw1HCyscente~15 =  0
15._at: timew1w3w4       =  4
        Lnw1HCyscente~15 =  1
16._at: timew1w3w4       =  5
        Lnw1HCyscente~15 = -1
17._at: timew1w3w4       =  5
        Lnw1HCyscente~15 =  0
18._at: timew1w3w4       =  5
        Lnw1HCyscente~15 =  1
19._at: timew1w3w4       =  6
        Lnw1HCyscente~15 = -1
20._at: timew1w3w4       =  6
        Lnw1HCyscente~15 =  0
21._at: timew1w3w4       =  6
        Lnw1HCyscente~15 =  1
22._at: timew1w3w4       =  7
        Lnw1HCyscente~15 = -1
23._at: timew1w3w4       =  7
        Lnw1HCyscente~15 =  0
24._at: timew1w3w4       =  7
        Lnw1HCyscente~15 =  1
25._at: timew1w3w4       =  8
        Lnw1HCyscente~15 = -1
26._at: timew1w3w4       =  8
        Lnw1HCyscente~15 =  0
27._at: timew1w3w4       =  8
        Lnw1HCyscente~15 =  1
28._at: timew1w3w4       =  9
        Lnw1HCyscente~15 = -1
29._at: timew1w3w4       =  9
```

```
        Lnw1HCyscente~15 =  0
30._at: timew1w3w4       =  9
        Lnw1HCyscente~15 =  1
31._at: timew1w3w4       = 10
        Lnw1HCyscente~15 = -1
32._at: timew1w3w4       = 10
        Lnw1HCyscente~15 =  0
33._at: timew1w3w4       = 10
        Lnw1HCyscente~15 =  1
34._at: timew1w3w4       = 11
        Lnw1HCyscente~15 = -1
35._at: timew1w3w4       = 11
        Lnw1HCyscente~15 =  0
36._at: timew1w3w4       = 11
        Lnw1HCyscente~15 =  1
37._at: timew1w3w4       = 12
        Lnw1HCyscente~15 = -1
38._at: timew1w3w4       = 12
        Lnw1HCyscente~15 =  0
39._at: timew1w3w4       = 12
        Lnw1HCyscente~15 =  1
40._at: timew1w3w4       = 13
        Lnw1HCyscente~15 = -1
41._at: timew1w3w4       = 13
        Lnw1HCyscente~15 =  0
42._at: timew1w3w4       = 13
        Lnw1HCyscente~15 =  1
```

	Delta-method					
	Margin	std. err.	z	P>|z|	[95% conf.	interval]
_at						
1	12.08962	.9416402	12.84	0.000	10.24404	13.9352
2	14.42683	.276687	52.14	0.000	13.88454	14.96913
3	16.76405	.9462162	17.72	0.000	14.9095	18.6186
4	12.08185	.8918854	13.55	0.000	10.33379	13.82991
5	14.30405	.2620068	54.59	0.000	13.79053	14.81758
6	16.52626	.8954954	18.45	0.000	14.77112	18.28139
7	12.07408	.8538325	14.14	0.000	10.4006	13.74756
8	14.18127	.2507578	56.55	0.000	13.6898	14.67275
9	16.28847	.8570125	19.01	0.000	14.60875	17.96818
10	12.06632	.8290941	14.55	0.000	10.44132	13.69131
11	14.0585	.2434162	57.75	0.000	13.58141	14.53558
12	16.05068	.8324663	19.28	0.000	14.41907	17.68228
13	12.05855	.8188779	14.73	0.000	10.45358	13.66352
14	13.93572	.2403404	57.98	0.000	13.46466	14.40678
15	15.81289	.8231045	19.21	0.000	14.19963	17.42614
16	12.05078	.8237245	14.63	0.000	10.43631	13.66525
17	13.81294	.2416933	57.15	0.000	13.33923	14.28665
18	15.57509	.8294415	18.78	0.000	13.94942	17.20077
19	12.04301	.8433741	14.28	0.000	10.39003	13.696
20	13.69016	.2474023	55.34	0.000	13.20526	14.17506
21	15.3373	.8511268	18.02	0.000	13.66913	17.00548
22	12.03525	.8768321	13.73	0.000	10.31669	13.75381
23	13.56738	.2571774	52.75	0.000	13.06332	14.07144
24	15.09951	.8870353	17.02	0.000	13.36096	16.83807
25	12.02748	.9225975	13.04	0.000	10.21922	13.83574
26	13.4446	.2705783	49.69	0.000	12.91428	13.97492
27	14.86172	.9355308	15.89	0.000	13.02812	16.69533
28	12.01971	.9789457	12.28	0.000	10.10101	13.93841
29	13.32182	.2870977	46.40	0.000	12.75912	13.88452
30	14.62393	.994774	14.70	0.000	12.67421	16.57365

31	**12.01194**	**1.044165**	**11.50**	**0.000**	**9.965418**	**14.05847**
32	**13.19904**	**.3062313**	**43.10**	**0.000**	**12.59884**	**13.79925**
33	**14.38614**	**1.062969**	**13.53**	**0.000**	**12.30276**	**16.46953**
34	**12.00418**	**1.116702**	**10.75**	**0.000**	**9.815481**	**14.19287**
35	**13.07626**	**.3275214**	**39.92**	**0.000**	**12.43433**	**13.71819**
36	**14.14835**	**1.13851**	**12.43**	**0.000**	**11.91692**	**16.37979**
37	**11.99641**	**1.195224**	**10.04**	**0.000**	**9.653811**	**14.33901**
38	**12.95349**	**.3505752**	**36.95**	**0.000**	**12.26637**	**13.6406**
39	**13.91056**	**1.220031**	**11.40**	**0.000**	**11.51935**	**16.30178**
40	**11.98864**	**1.278631**	**9.38**	**0.000**	**9.48257**	**14.49471**
41	**12.83071**	**.3750677**	**34.21**	**0.000**	**12.09559**	**13.56583**
42	**13.67277**	**1.306414**	**10.47**	**0.000**	**11.11225**	**16.2333**

```
16 .
17 .
18 . marginsplot, recast(line) recastci(rarea) ciopt(color(gs10) alwidth(none) fintensity(90)) ci1opt(color(gs15) al
   > pattern(solid)) plot1opts(lc(gs0) lpattern(dot)) plot2opts(lc(gs0) lpattern(dash)) legend(order(1 "Lnw1HCyscent

   Variables that uniquely identify margins: timew1w3w4 Lnw1HCyscenter2p15

19 .
20 . graph save "FIGURE4.gph",replace
   file FIGURE4.gph saved

21 .
22 .
23 . su Lnw1HCyscenter2p15 if HNDwave==1
```

Variable	Obs	Mean	Std. dev.	Min	Max
Lnw1HCysc~15	**1,460**	**-.0006306**	**.3278358**	**-1.09221**	**2.573753**

```
24 .
25 . capture log close
```