

MAOR - EFFECTS OF EDUCATION ON FEAR

Final estimation of fixed effects
(with robust standard errors)

Fixed Effect	Coefficient	Standard Error	T-ratio	Approx. d.f.	P-value
For INTRCPT1, B0					
INTRCPT2, G00	0.584721	0.086100	6.791	21	0.000
EDU_DX, G01	-0.807578	0.185099	-4.363	21	0.000

A MULTILEVEL MODEL OF EDUCATION ON FEAR

The outcome variable is MFEAR

The model specified for the fixed effects was:

Level-1 Coefficients	Level-2 Predictors
INTRCPT1, B0	INTRCPT2, G00
\$ EDU_DUM slope, B1	EDU_DX, G01
	INTRCPT2, G10

- '#' - The residual parameter variance for this level-1 coefficient has been set to zero.
- '*' - This level-1 predictor has been centered around its group mean.
- '\$' - This level-2 predictor has been centered around its grand mean.

Level-1 Model

$$Y = B0 + B1*(EDU_DUM) + R$$

Level-2 Model

$$B0 = G00 + G01*(EDU_DX) + U0$$

$$B1 = G10$$

Final estimation of fixed effects
(with robust standard errors)

Fixed Effect	Coefficient	Standard Error	T-ratio	Approx. d.f.	P-value
For INTRCPT1, B0					
INTRCPT2, G00	0.256696	0.041220	6.227	21	0.000
EDU_DX, G01	-0.807700	0.187456	-4.309	21	0.000
For EDU_DUM slope, B1					
INTRCPT2, G10	-0.027987	0.067075	-0.417	338	0.676

DOES THE EFFECT OF EDUCATION W/I NBHDS ON FEAR VARY ACROSS NEIGHBORHOODS?

** NOTE - WE CAN ALLOW IT TO VARY EVEN THOUGH THE OVERALL AVERAGE EFFECT IS NOT SIGNIFICANT **

The outcome variable is MFEAR

The model specified for the fixed effects was:

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Level-1                                Level-2
Coefficients                            Predictors
-----
          INTRCPT1, B0                INTRCPT2, G00
$          EDU_DUM slope, B1          EDU_DX, G01
*          INTRCPT2, G10
```

'*' - This level-1 predictor has been centered around its group mean.
'\$' - This level-2 predictor has been centered around its grand mean.

The model specified for the covariance components was:

```
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Sigma squared (constant across level-2 units)
Tau dimensions
          INTRCPT1
          EDU_DUM slope
Summary of the model specified (in equation format)
-----
```

Level-1 Model

$$Y = B0 + B1*(EDU_DUM) + R$$

Level-2 Model

$$B0 = G00 + G01*(EDU_DX) + U0$$

$$B1 = G10 + U1$$

RELIABILITIES

- USU. CUTOFF FOR A RELIABLE SLOPE WOULD BE BETTER THAN .10 - BUT WE WILL PROCEED ANYWAY

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INTRCPT1, B0                0.424
EDU_DUM, B1                 0.039
-----
```

Final estimation of fixed effects
(with robust standard errors)

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Fixed Effect                Coefficient    Standard      Approx.
                             Error          T-ratio      d.f.        P-value
-----
For          INTRCPT1, B0
INTRCPT2, G00                0.256148    0.041100     6.232       21     0.000
EDU_DX, G01                 -0.802761    0.189437    -4.238       21     0.000
For EDU_DUM slope, B1
INTRCPT2, G10                -0.028642    0.066940    -0.428       22     0.672
-----
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Final estimation of variance components:

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Random Effect                Standard      Variance      df      Chi-square  P-value
                             Deviation    Component
-----
INTRCPT1,          U0          0.13654      0.01864    21      41.39668   0.005
EDU_DUM slope,    U1          0.06466      0.00418    22      31.84053   0.080
level-1,          R          0.56183      0.31565
-----
```

IASAO FOR EDUCATION ON FEAR

Level-1 Coefficients	Level-2 Predictors
-----	-----
INTRCPT1, B0	INTRCPT2, G00
\$	EDU_DX, G01
* EDU_DUM slope, B1	INTRCPT2, G10
\$	WHITEDX, G11

'*' - This level-1 predictor has been centered around its group mean.

'\$' - This level-2 predictor has been centered around its grand mean.

The model specified for the covariance components was:

Sigma squared (constant across level-2 units)

Tau dimensions
 INTRCPT1
 EDU_DUM slope

Summary of the model specified (in equation format)

Level-1 Model

$$Y = B0 + B1*(EDU_DUM) + R$$

Level-2 Model

$$B0 = G00 + G01*(EDU_DX) + U0$$

$$B1 = G10 + G11*(WHITEDX) + U1$$

Tau (as correlations)

INTRCPT1,B0	1.000	-0.970
EDU_DUM,B1	-0.970	1.000

Random level-1 coefficient	Reliability estimate
-----	-----
INTRCPT1, B0	0.411
EDU_DUM, B1	0.124

The value of the likelihood function at iteration 1787 = -2.952889E+002

The outcome variable is MFEAR

Final estimation of fixed effects
 (with robust standard errors)

Fixed Effect	Coefficient	Standard Error	T-ratio	Approx. d.f.	P-value
-----	-----	-----	-----	-----	-----
For INTRCPT1, B0					
INTRCPT2, G00	0.250378	0.039764	6.297	21	0.000
EDU_DX, G01	-0.734727	0.191071	-3.845	21	0.001
For EDU_DUM slope, B1					
INTRCPT2, G10	-0.020164	0.066757	-0.302	21	0.765
WHITEDX, G11	-0.398266	0.211929	-1.879	21	0.074

Final estimation of variance components:

Random Effect		Standard Deviation	Variance Component	df	Chi-square	P-value
INTRCPT1,	U0	0.13245	0.01754	21	41.62965	0.005
EDU_DUM slope,	U1	0.12163	0.01479	21	31.18978	0.070
level-1,	R	0.56018	0.31381			

CONCLUSIONS – TAKE A FEW MOMENTS AND WRITE – WE ARE USING DISTRICTS
BUT WILL CALL THIS NEIGHBORS AND NEIGHBORHOODS

1. What do we know about the outcome variation of fear? Does it have an ecological component?
2. What did the MAOR show with EDU_DX (proportion of respondents with greater than HS education) show?
3. In the multilevel model, two possible impacts of education on fear were explored: differences between neighbors (group mean centered version of the variable), and neighborhood average education: describe what was shown.
4. What happened when the proportion of white respondents was allowed to influence the effect of education on fear?

STEPS WITH YOUR PAPER

1. 3/23 Pick an outcome and inform me
 - a. Your outcome
 - b. The team, if there is one
 - c. Key theoretical predictor(s) AND hypotheses and rationales explaining why it/they are crucial
 - d. A couple of relevant references
 - e. The data set if you do not want to use the Phila. PAS
 - f. Should be written like an abstract
2. 3/30
 - a. Write a detailed statement of what your model will be – spec this out like you see Levels 1 and 2 specified in the HLM output. Except for demographics, you want a hypothesis and rationale for each predictor. Be sure you are clear about centering and how. Be sure that the centering corresponds to your theorizing. If you want to explore the multilevel effects of a predictor it must be group mean centered (frog pond effect) at Level 1.
 - b. Submit updated reference list
 - c. Submit draft method section
3. 4/6
 - a. Submit draft results section **INCLUDING FULLY FORMATTED TABLES**
 - b. Submit draft introduction which includes a review of key literature, and statement of hypotheses – no less than 6 pages and no more than 10 pages
4. 4/20 draft poster due – can be in many forms – details to follow

PLEASE NOTE:

- your final paper must be submitted following ASC or APA publication guidelines. (http://www.asc41.com/crim_guide.html) It must be a COMPLETE paper (title page, abstract, body of paper, references, tables, figures, endnotes).
- A detailed grading rubric will be coming along later for both the poster session and for the final paper