Addressing the Building Evidence of Effectiveness McNair Competitive Priority

Anthony Albecker
Sharyn Schelske
Dr. Bruce Center

A Short History of Evaluation of TRIO Programs

   -Competitive Priorities
   -USED SSS Evaluation (1991) and UB Evaluation (mid-90s/2006)
   -Potential USED McNair Evaluation (2007)

Overview U of M McNair Program Model (1991-Present)

   -Intensive academic year and summer components
   -Mentors, program partners, networking
   -Program and cohort identity

"This Sounds Good, Does it Work?"

   -Description of Propensity Score Matching
   -Methodology
   -Preliminary Results

What we are learning and future direction

   -Reconciling 20 years of data (USED/Institution/Natl. Clearinghouse)
   -Using this evaluation

Discussion

Propensity Analysis

- Used to create comparison group.

- Best with very large # of potential comparison students.

- We had 112,187 U of M students from 2000 on.

- Logistic regression comparing McNair students to everyone on seven attributes.

- Does not do exact match.

- Computes probability of any student being part of McNair group.

- Created comparison group matching on this probability.

Comparison Attributes

- low income (Y/N)
- first generation (Y/N)
- race
- sex
- age when first enrolled
- cum GPA
- STEM degree (Y/N)
- ACT score (when available)

And then...

- Ensured no sig differences on each attribute
- Comparison group 3x size of McNair group.
- Took these 1412 names to National Student Clearinghouse to determine subsequent academic achievement.

When Propensity Matching is Impractical

- Compare McNair students with *all students* at your institution.

- Use vars such as GPA, Whiteness, Poverty, etc.

- Likely create conservative comparison.

- Use National Student Clearinghouse to see subsequent academic achievement.

- Compare them.

- If you need help, call me.

Degree Attained and type of students: Entire Sample
*Note. *** = $p \leq 0.001$*

Type of degree		McNair students	Non-McNair students	Chi-squared	
.		N (Column %)	N (Column %)		
Students have a bachelor's or advanced degree	Yes	288 (81.4%)	786 (74.3%)	7.3***	
	No	66 (18.6%)	272 (25.7%)		
Students have a bachelor's degree only	Yes	92 (26%)	500 (47.3%)	49.3***	
	No	262 (74%)	558 (52.7%)		
Students went beyond bachelor's degree	Yes	194 (54.8%)	284 (26.8%)	92.6***	
	No	160 (45.2%)	774 (73.2%)		
Students have an advanced degree	Yes	125 (35.3%)	114 (10.8%)	113.6***	
	No	229 (64.7%)	944 (89.2%)		

Degree Attained and type of students: Students Not Currently Enrolled
Note. *** = $p \le 0.001$

Type of degree		McNair students	Non-McNair students	Chi-squared	Phi
		N (Column %)	N (Column %)		
Students have a bachelor's or advanced degree	Yes	241 (84%)	662 (87.7%)	2.5	
	No	46 (16%)	93 (12.3%)	No sig difference	
.					
Students have a bachelor's degree only	Yes	91 (31.7%)	494 (65.4%)	96.1***	
	No	196 (68.3%)	261 (34.6%)		
Students went beyond bachelor's degree	Yes	148 (51.6%)	168 (22.3%)	84.6***	
	No	139 (48.4%)	587 (77.7%)		
Students have an advanced degree	Yes	112 (39%)	99 (13.1%)	86.5***	
	No	175 (61%)	656 (86.9%)		