Who is Prize-d in Cognitive and Developmental Psychology?

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• Suparna Rajaram – WICS & Stony Brook
Question 1

• Why do women in psychology have a small percentage of awards?
  – Hypothesis 1: sex differences in productivity (quantity or quality or both)
  – Hypothesis 2: sex differences in return on productivity
  – Hypothesis 3: sex differences in initial sorting
Question 2

• What predicts awards?
  – Hypothesis 1: quantity
  – Hypothesis 2: \( h \) – combination of quantity and citations
  – Hypothesis 3: how often most highly cited publication is cited
Method

- Contacted via email 228 cognitive and developmental psychologists
  - From Very High or High Research institutions
  - With fellow status in Association for Psychological Science or National Academy of Sciences
- 49% response rate (n = 112)
  - 56% of females responded
  - 46% of males responded
Sample characteristics

• Sex: 50 female; 62 male
• Status: Full Professors (42 Distinguished)
• Affiliation: Very High Research (n=43) or High Research (n=6) schools
Predictor Variables

- Year of PhD (used as covariate)
- Total publications
- $h$
- Highest citations for single publication
Awards Score

- Contacted 34 psychologists, of whom 20 responded (59%)
- Psychologists rated prestige of awards on 7-point scale
- Scale converted to point system
  - NAS = 5 (M = 6.9, n = 20)
  - APS = 2 (M = 3.35, n = 17)
- Awards score equals total awards x perceived prestige rating
Question 1

• Why do women in psychology have a small percentage of award?

• Hypothesis 1: sex differences in productivity
  – No: women = men in total publications (124 vs 162)
  – No: women = men in $h$ (23 vs 25)
  – No: women = men in high cites (387 vs 480)
Question 1, cont’d

• Why do women in psychology have a small percentage of awards?
  – Hypothesis 2: *sex differences in return on productivity*
  – No: women = men in award scores (11 vs 10)
Question 1, cont’d

• Why do women in psychology have a small percentage of awards?
  – Hypothesis 3: sex differences in initial sorting
  – Likely: higher percentage of women than of men at teaching-intensive institutions
Question 2

• What predicts awards?
  – Hypothesis 1: quantity – yes, but only when considered alone
  – Hypothesis 2: $h$ – yes, but not when considered with high cites
  – Hypothesis 3: high cites – yes, even when considered with total pubs and $h$
Predicting awards: \( R^2 = .49^* \)

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* \( \leq 0.001 \)
Summary

• Women and men in cognitive and developmental psychology who are employed at Very High or High Research institutions and who have fellow status in the APS do not differ in
  – number of total publications
  – $h$
  – highest citation for a single publication
  – awards
Conclusions

• Awards can be predicted
  – $h$ has limited predictive value
  – Strongest predictor is number of citations of most highly cited publication; $M = 440$
  – Once high cites are included, no variable other than year of PhD contributes significantly to accounting for the variance in awards
Yet women and men differ in awards overall

- APA Distinguished Scientific Career Contributions from 1956-2006
  - M awards to women = 9 % (range 0 % to 66 %)

- APS Invited Address speakers from 1989 to 2008
  - M invited speakers = 18 % (range 12 % to 47 %)

- No improvement over time
Why?

• Hypothesis: initial sorting of women into teaching-intensive schools results in lower productivity and lower opportunity for high cites (Allison & Long, 1990; Xie & Shauman, 2003)

• Comparison of annual publication rates
  – M at research universities = 2.12
  – M at doctoral/elite lib arts = .91
  – M at MA and strong 4-year schools = .29
Recommendation

• Aim for a best seller: has an independent effect above and beyond total publications and $h$

• Reason: a best seller makes one’s name more widely known and cognitively available
## Data on key variables

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