Writing a Successful Grant Proposal

Tamar H. Gollan
University of California, San Diego
What I Did:

A) Searched NIDCD & NICHD
   • “language” & “R01”
     RO1 = Individual Investigator Awards
     NIDCD = National Institute of Deafness and Communication Disorders
     NICHD = National Institute of Child Health and Human Development

B) Emailed a buncha people
   • 17 men, and 17 women

C) Inclusion Criteria
   – Current R01
   – I recognize the name
   – I’ve always wondered how old you are...
Study Participants

Pélagie Beeson
Iris Berent
Shiela Blumstein
David Caplan
Alfonso Caramazza
Gary Dell
Jeff Elman
Karen Emmorey
Julia Evans
Kara Federmeier
Vic Ferreira

Lou Ann Gerken
Judy Kroll
Brian MacWhinney
Michele Miozzo
Padraig O'Veaghda
Liz Peña
Brenda Rapp
Keith Rayner
Arty Samuel
Lew Shapiro
Mike Vitevitch
What I Asked:

- Age at first grant, first R01, years post-PhD
- Times submitted before funded
- Review process improves grant/research?
- Advice to young investigators
- Review improves grant & research?
- Current Age

- Are you sick of me yet?
  67% nope, not at all, never, etc.
  29% not yet...

You assume I wasn’t already sick of you...

WHY R01s?
NIH report that the average age for getting a first R01 is going up...
Who Responded:

– 12 men, 12 women

– Excluded
  • One age-shy male
  • One male with unusual background
  • One woman who responded after the deadline

– Age
  • Men (n=10) 53.5 ($SD = 10.3$)  $F < 1$
  • Women (n=11) 49.5 ($SD = 7.9$)
Couldn’t see NIH’s claim initially...

Age at first R01

Current Age

more than 1SD over mean age for 1st R01

2 women

R² = 0.00

more than 1SD under mean age for 1st R01

3 men & 1 woman
After eliminating “outliers” the average age for first R01 going up over time.

\[ R^2 = 0.40 \]
Women Taking Longer than Men

5 year difference

$p = .01$

age at 1st R01

men
women
Other Differences

– Years post-PhD at first R01
  • Men (n=10) 5.7 (SD = 3.5)
  • Women (n=11) 8.8 (SD = 3.1)  \( p = .05 \)

– Chutzpah to go for R01 on first try at NIH
  • Men (n=10) 80% (8/10)
  • Women (n=11) 36% (4/11)

No-difference

– Number of times submitted 1st R01 b4 funded
  • Men 1.80 (SD = 0.8)  \( F < 1 \)
  • Women 1.75 (SD = 0.8)
NIH webpage confirms some gender differences... e.g.,
But equal success rates for men & women

Success Rates for Women and Men on Competing Research Project Grants, FY 1985 - FY 2004
Beating the Odds (Peer Advice Column)

• Get feedback
  – From well-funded colleagues in your research area
  – Take it seriously, NOT personally
  – Unless serious objection → make the changes!

• Emphasize Novel Contributions
  – No one has ever tested if this simple but important idea is true...
  – Sell the big picture (but leave out the BS)
  – Spell out theoretical framework, hypotheses, methods, and small details

• Miss a deadline to turn in a “perfect” grant
  – Impossible to recover from crappy submission
  – Carelessness can “make or break” a grant
Beating the Odds (Peer Advice Column)

- Anticipate your reviewers
  - exact people or "school of thought X & Y"
  - respect alternative theoretical approaches
- Less is more → leave out weak parts
  - Make it solid, rigorous, convincing – not too big
  - Discuss research plan with colleagues before writing too much so flaws in ideas will surface early
- Get strong collaborators on the grant
- Toe the line...don’t be too critical of received view
  - "I did not resubmit ...[because] I did not feel I could change my style of work just to please an ignoramus."
Beating the Odds (Peer Advice Column)

- Pilot data to support feasibility
- Talk to the program officer
- Start with an “entry level” grant
- See the proposal with reviewer’s eyes
  - not getting their own work done to review yours
  - selling your research is different from doing it well
  - motivate the research
  - assume reviewers are smart, but short on time, and want a big bang for their buck
  - make it easy to read
Beating the Odds (Peer Advice Column)

- Keep trying – be resilient
- Don’t give up!
- Persistence is the only way to succeed
- Persist, persist, persist...
  - Outcome depends on particular composition of review panel...
  - If you are excited about your ideas, keep working to improve the grant...
Majority of Participants Say Review Process Improves Grants & Research

- Don't Know
- First Round
- NO
- A Little
- Some
- A lot

Percentage of Participants

- Improves Grants
- Improves Research
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Alzheimer’s Disease Centers Program

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