Do ASF fellowships work?

Alycia Halladay
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AUTISM SCIENCE FOUNDATION
What’s the point for ASF?

• Training fellowships still #1 investment
• ASF only private nonprofit to be offering pre and postdoctoral fellowships in 2016 on
• Primary goal is to increase the pool of autism researchers and enhance quality of research
• Secondary goal is to provide research discoveries for the community
• Tracking a person vs. tracking a discovery
What are outcomes?

NIH progress reports/HRA members – let’s share!

Examples:

• Specific grant accomplishments
  – Training opportunities
  – Publications and presentations, submissions
• Products
  – FDA approvals, licenses, discoveries
  – Websites, patents
• Impact
  – Other funding, applications
• Investigators: Where are they now?
• Mostly based on self-report/reports from grantees
Self – report data on outcomes

Benefits and Pitfalls

- Grantees or universities provide data
- Automated
- Rich dataset not available elsewhere, such as community engagement
- Get whatever you ask for

- Biased
- Dependent on trainee response
- Missing outcomes 4 years out
- Only captures on one group
Example of self-report

7. Was this grant useful in obtaining additional funding from either public or private sources? List any funding so far that was obtained as a result of this grant. This also may include grants obtained by your mentor as a result of your research.

We are currently seeking to leverage these findings for additional rare disease research funding opportunities.

Ummm, I didn’t think a NARSAD grant counted.
Tools and examples used by others

Helping Wayne State University achieve improved student tracking and satisfaction

Wayne State University, facing declining revenue from the state, turned to Huron for help in improving its student retention rate, and enhancing the overall enrollment and draw of out-of-state students. Huron conducted a broad review of the university’s business operations, with a special focus on the admissions, financial aid, registrar, and bursar operations. Huron helped Wayne State install a system that allowed the university’s staff to report, track, and evaluate the success and satisfaction of its students.
Current ways track grantee outcomes:

- Traditional: survey grantees
- Newer: engage consultant or Uber Research
- Radical: use an experimental design
- Radical + on the cheap: hire summer interns
ASF goals

1. To understand if ASF funding encouraged fellows to stay in autism research
2. To examine whether or not ASF funding led to greater productivity of future autism or science careers
3. This required a more experimental design with a comparison group that we could find data on
   • Applicants not funded
   • Needed passive approach
   • In the future gHRAsp / Uber as a source of “controls”?
More on this “not funded” group

- good score - not enough money
- required several minor or minor revisions before scoring
- bad score - all the money in the world wouldn't have helped
## Information collected

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current position</td>
<td>(autism/no autism)</td>
</tr>
<tr>
<td>Current employer</td>
<td>(science/no science)</td>
</tr>
<tr>
<td>Publications</td>
<td>productivity</td>
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<tr>
<td>Collaborations</td>
<td>networking</td>
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<td>Citation index</td>
<td>impact of science</td>
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<tr>
<td>Grants received</td>
<td>future in academia</td>
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<tr>
<td>Altmetric</td>
<td>alt-impact</td>
</tr>
</tbody>
</table>
How we collected it
Who collected it

Alycia Halladay
Esther Jou
Priyanka Shah
Sonia Agarwal
Hannah Grossman
Seowon Kim
### The spreadsheets

Total of 36 funded fellows, 286 unfunded fellows
Be careful of complete automation

Lab head

Boaz Barak
Tel Aviv University

Department
School of Psychological Sciences and Sagol School of Neuroscience

About Boaz Barak
In my lab, we study the neurobiological mechanisms responsible for abnormal social and anxiety-like behaviors in genetic neuropsychiatric disorders such as Williams syndrome and autism. I did my postdoctoral...
The results

Percent staying in autism research

ASF funded

not funded
The results

Percent staying in autism research

- 2010
- 2011
- 2012
- 2013
- 2014
The results

Female percent staying in autism research

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td></td>
<td>50</td>
<td>100</td>
<td>100</td>
<td>80</td>
<td>80</td>
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</table>

Legend: 50% for 2010, 100% for 2011 and 2012, 80% for 2013 and 2014.
The results

Average number of publications

Interpretation: great scientists are applying to ASF. They may not always stay in autism research, but they are publishing!
The results

publications by award type

- predoc
- postdoc

<table>
<thead>
<tr>
<th>Year</th>
<th>Predoc</th>
<th>Postdoc</th>
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</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
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</tr>
<tr>
<td>2014</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
Let's discuss...

• Altmetric – what is this really measuring? Who else uses it?
• Collaborators – names on a paper or true collaborations? i.e. genetics studies
• Should we stratify by “stayed in autism research” vs. “didn’t stay” for other outcomes
Takeaways

• If you have funding to do this analysis, pay someone to do it

• 4 year outcomes are not nearly as interesting as 8 year outcomes
  – Academic positions
  – Seniority and leadership positions
  – Most predocs are postdocs
  – Most postdocs were still postdocs

• Consider additional metrics besides bibliometrics metrics

• When talking success of people, sometimes stories are better than numbers