

Are Physician-Scientists Becoming an Endangered Species?

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JOHNS HOPKINS
M E D I C I N E

Introductions *(5 minutes)*

- Presenters
- Table introductions

Step 1: Objectives

- to increase knowledge about physician scientist burn-out via an overview of the literature and results from a recent survey
- to identify faculty stressors via active engagement with colleagues
- to identify creative tools, resources, or approaches for intervention

Step 2: Why might someone quit research? *(10 minutes)*

- Sizeable body of literature around faculty vitality (i.e., faculty satisfaction, retention, burn-out)
 - Consensus = many faculty have high levels of stress and low career satisfaction (Dankoski et al., 2011)
 - 25-40% of faculty considering and ultimately do leave academic medicine (Alexander & Lang, 2008; Lowenstein et al., 2007; Schindler et al., 2006; Speck et al., 2012)

Step 2: Why might someone quit research? *(10 minutes)*

- Table graffiti exercise:
 1. Think of all the reasons why a physician scientist might consider quitting research
 2. Talk about these reasons at your table
 3. Write one reason per sticky note
 4. Put sticky notes randomly on poster paper

Step 3: Report-outs *(5 minutes)*

What did your table identify as the reasons why a physician scientist might consider quitting research?

Step 3 cont.: Literature review

(5 minutes)

- Legacy of the “triple threat” (clinician, investigator, educator)
 - Relentless pressure to generate revenues from patient care (RVUs) and grants (Lowenstein et al., 2007)
 - Extremely competitive funding climate across the board - federal, state, industry, foundations, etc. (e.g. NIH sequestration cuts)
- Junior faculty particularly susceptible to discontent – unclear expectations, isolation, difficulty finding balance (Austin, Sorcinelli, & McDaniels, 2007; Smith et al., 2001) and report substantially higher levels of depression, anxiety, and job dissatisfaction more than senior counterparts (Schindler et al., 2006)

Step 3 cont.: Literature review

Reasons for leaving academic medicine generally fall into 4 categories:

- 1) Internal factors – lower sense of relatedness/inclusion and engagement, issues around self-efficacy, values alignment, high ethical/moral distress, difficulty balancing, lack of role models
- 2) External factors – low salary, lack of career/professional advancement and leadership opps, frustrations with research

Cropsey et al., 2008; Demmy et al., 2002; Levine et al., 2011; Lowenstein et al., 2007; Pololi et al., 2012

Step 3 cont.: Literature review

Reasons for leaving academic medicine...

- 3) Environment – absence of academic community, unsupportive environment, low sense of relatedness/inclusion/engagement, absence of faculty development programs/institutional commitment to support faculty
- 4) Leadership – chair/department/institutional leadership issues, failure of chairs to evaluate academic progress regularly, lack of recognition of both clinical work and teaching in promotion evals

Cropsey et al., 2008; Demmy et al., 2002; Levine et al., 2011; Lowenstein et al., 2007; Pololi et al., 2012

Step 4: Categorization *(10 minutes)*

1. Rotate graffiti boards to a neighboring table
2. Review your neighbor's graffiti board
3. Group the sticky notes into themes:

internal

external

environment

leadership

other?

Step 5: Report-outs *(5 minutes)*

- Each table reports the themes they identified and a sampling of indicators under each

Step 5 cont.: Survey results

(5 minutes)

Annual evaluation of the Rush Research Mentoring Program:

Mentees = 62 (44 survey respondents [71% response rate])

Females = 61%

Married = 68%

Mean age = 38 (SD = 6.5)

Mean % research effort = 57.4% (SD = 32.2)

Mean % clinical effort = 40.3% (SD = 26.8)

In the past year, have you considered quitting research?

Yes = 17 (44% of 39 respondents)

Step 5 cont.: Survey results

Which themes?
 Internal
 External
 Environment
 Leadership
 Other?

Table 1. Mental Health Themes		Considered quitting research in the past year		<i>p</i> -value
		Yes (n=17 [44%])	No (n=22 [56%])	
Burnout , # (valid %)				<0.001
No symptoms	7 (17.1%)	0	6 (27.3)	
Occasionally under stress	24 (58.5%)	7 (41.2)	16 (72.7)	
Definitely burning out	9 (22.0%)	9 (52.9)	0	
Symptoms won't go away	1 (2.4%)	1 (5.9)	0	
Completely burned out – can't go on	0	0	0	
Clinical Research Appraisal Inventory , mean (SD) Range = 0-10 (No confidence – Total confidence)	7.6 (1.3)	7.0 (1.4)	8.1 (1.0)	0.007
Job Satisfaction, mean (SD) Range = 1-7 (Strongly disagree – Strongly agree)	5.2 (0.9)	4.7 (0.8)	5.6 (0.8)	0.001
Career Satisfaction, mean (SD) Range = 1-5 (Not satisfied – Very satisfied)	3.7 (0.8)	3.1 (0.9)	4.1 (0.5)	<0.001

Step 5 cont.: Survey results

There were **no differences** between the groups on:

- ✓ gender
- ✓ marital status
- ✓ number of dependents
- ✓ number of life events
- ✓ work preferences
- ✓ passion & interest
- ✓ professionalism
- ✓ networking
- ✓ social support
- ✓ life satisfaction
- ✓ creativity
- ✓ reports of mentor effectiveness
- ✓ reports of experiences with mentor

Which themes?

Internal
External
Environment
Leadership
Other?

Step 6: Brainstorming solutions

(10 minutes)

1. Each table is assigned one theme:
internal, external, environment, leadership, other?
2. For the theme that your table has been assigned, try to think of creative approaches (e.g., tools, resources, strategies) to intervene or mitigate physician investigator frustration

Step 7: Report-out

(15 minutes)

- What did your table identify as possible solutions?
- Note: We will provide a summary of this break-out session to all participants. Please make sure you have provided your email address on the sign-in sheet!

References

- Hand-outs available:
 - *References*
 - *Rubio's assessment inventory*

Thank you for your participation!

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