

Northwestern University Feinberg School of Medicine



Dreams of Balance: The Intersection of Expectations, Balance, Isolation and Connections for Women and Men Early in PhD Training

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Current Choices, Future Careers



Situation

Women in the sciences are less likely to gain tenure at top research universities, often attributed to issues of balance and parenting

What's missing?

- Other research notes an increasing desire for a “work-life balance” beyond parenting for women and men
- The research on balance looks intensively at work-personal conflicts among working people, and not prospectively toward future careers
- Career trajectories toward academic science begin long before tenure decisions

Our Research

Qualitative study of 54 PhD students explores factors in student dissertation lab choice

Contribution

Women and men use a combination of expectations around science careers, desire for balance (discretionary time and family time), and a sense of connection to laboratory and cohort colleagues to make decisions about current and future trajectory



National Longitudinal Study of Young Biomedical Scientists (NLSYBS)

- How do biomedical scientists make decisions about their science career trajectories?
- What factors influence these trajectories along the way?
- How do these factors differ for women, men, and scientists of color?

Total recruitment: 533

Of those going on to graduate school in the biomedical sciences:

Students recruited as undergraduates:	98
Students recruited as postbaccalaureates:	31
Students recruited as graduate students:	<u>167</u>
TOTAL PHD COHORT:	320



NLSYBS PhD Cohort

	Women	Men	TOTAL
	n=204	n=116	n=320
Self-identified Race (Self-identified Ethnicity)			
Native American/Alaska Native	4 (3 Hisp.)	2 (1 Hisp.)	6 (4 Hisp.)
Asian/Asian-American	18 (1 Hisp.)	11 (0 Hisp.)	29 (1 Hisp.)
Black/African-American	39 (2 Hisp.)	16 (3 Hisp.)	55 (5 Hisp.)
White	117 (16 Hisp.)	81 (16 Hisp.)	198 (32 Hisp.)
More than one race	8 (2 Hisp.)	2 (1 Hisp.)	10 (3 Hisp.)
Unknown/not reported	18 (15 Hisp.)	4 (3 Hisp.)	22 (18 Hisp.)
Total Hispanic	39	24	63

Characteristics of Our Study Sample

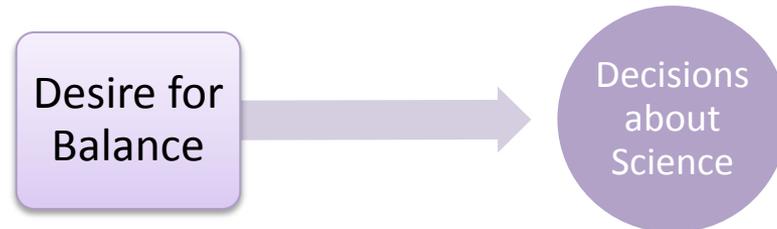


	Women	Men	TOTAL
	n=28	n=26	54
Race/Ethnicity (self-identified)			
African-American	2	1	3
Asian-American	1	4	5
Latino/a	1	0	1
White	24	21	45
Relationships			
Single	25	20	45
Married/Partnered	3	6	9
Desired Career			
PI	5	7	12
Liberal Arts environment	6	5	11
Academia (general)	7	8	15
Industry	7	6	13



How does a desire for balance play into career trajectories?

- Women seek positions for more flexibility (Ceci & Williams 2011)
- Glass ceiling/maternal wall (Williams & Segal 2003)
- Contemporary family forms lead to greater concerns with balance (Jacobs & Gerson 2001)
- Norms of long hours and putting science first (Etzkowitz, Kemelgor & Uzzi 2000)



Students are already taking future family into account



Of the 54 students...

36 say they plan to have children (18 women, 18 men)

A slightly different 36 (18 women/18 men) say they will take family into account when making career choices:

*I want to have a family and things and I know that people can do it um, while working in any field, so, uh, **and it's going to be like an important aspect when I am deciding which job I want to take** which will be nice to have to decide that.*

(Hispanic male, married, 2nd interview)

- Time
- Flexibility
- Money
- Location

Dreams of Balance in a science career trajectory

So if you were going to be an exceptional scientist balancing like science, family, ah, you know, if you decide to have kids like that's a crazy balance.

Dreams of Balance in a science career trajectory

So if you were going to be an exceptional scientist balancing like science, family, ah, you know, if you decide to have kids like that's a crazy balance.

But, you know, sometimes you just have to go to the gym during the day and that's balancing, too.

(White female, single, 1st interview)

Transitioning to graduate school: the first year



Q: Um, was there any particular challenging or stressful time [during the first year]?

A: Besides all the time?

(White female, single, 2nd interview)



Finding the first year's triple balance

There's coursework, there's rotations in lab, and also you gotta have a personal life.

(White female, single, 1st interview)

I actually have to balance everything from taking care of myself, taking care of class work and lab work

(Asian male, single, 2nd interview)

Began balanced: 19 (9F,10M)

- 10 (4F, 6M) stayed balanced
- 3 (2F, 1M) lost balance
- 6 (F) didn't say

Began out of balance: 22 (14F, 8M)

- 7 (5F, 2M) found balance
- 10 (5F/6M) stayed out of balance
- 5 (4F, 1M) didn't say

Balance between what I like to do and what I have to do

(White male, married, 1st interview)



Choosing a lab as a “pivotal point”

*Um, there was a little stress choosing which lab that I was going to because to me that was sort of **a pivotal point in my graduate career** that could ...not make or break it but would profoundly affect what I am doing later.*

(White male, married 2nd interview)



Balance and lab choice

Students choosing a dissertation lab focus on **scientific interest...**

And as far as type of project, obviously I would have to be interested in the project

(White female, single, 1st interview)



Balance and lab choice

Students choosing a dissertation lab focus on **scientific interest...**

...but also worry about **fit** with the social environment of the lab

*And as far as type of project, obviously I would have to be interested in the project **but for me, it's almost more important that I get along with the people in the lab.***

(White female, single, 1st interview)

Fit includes:

- Social integration with labmates and PI
- Matching expectations for workstyle
- Feeling of social support



Social integration with lab community

*I mean, in, in my experience science has been more social than it has been even experimentation... **You have to make a lab work socially.** I mean, and it's really important that the people get along because ...that's where you are every day, all day. (laughter)*

(White female, single, 1st interview)

-- the lab I chose as -- for my dissertation lab. They were actually the ones to start out this, uh, workout challenge, this cardiovascular exercise challenge.... and I also enjoyed it as well, so.

(Asian male, single, 2nd interview)



Workstyle: how it feels and time

I became pretty good friends with some of the people that I work with, and I think that it was just a good balance of science...mixed with a little bit of fun.
(White female, single, 2nd Interview)

*I didn't have any bad rotations. Like everything was just fine, but -- and I could've joined either of the first two labs I rotated in; but I -- I was never comfortable in them and I -- it was just -- **so there were times when I was working whatever, 60,70 hours a week, and not feeling like at home doing that.***

(White male, married, 2nd)



Feeling of social support

And [the PI is] very hands-on, in lab with us, teaching us things, working, doing experiments next to us. But also encouraging us to -- I mean, when you're in lab do your work, get your work done, be efficient. But don't live there. So I really, I really appreciate that.
(White female, single, 2nd interview)

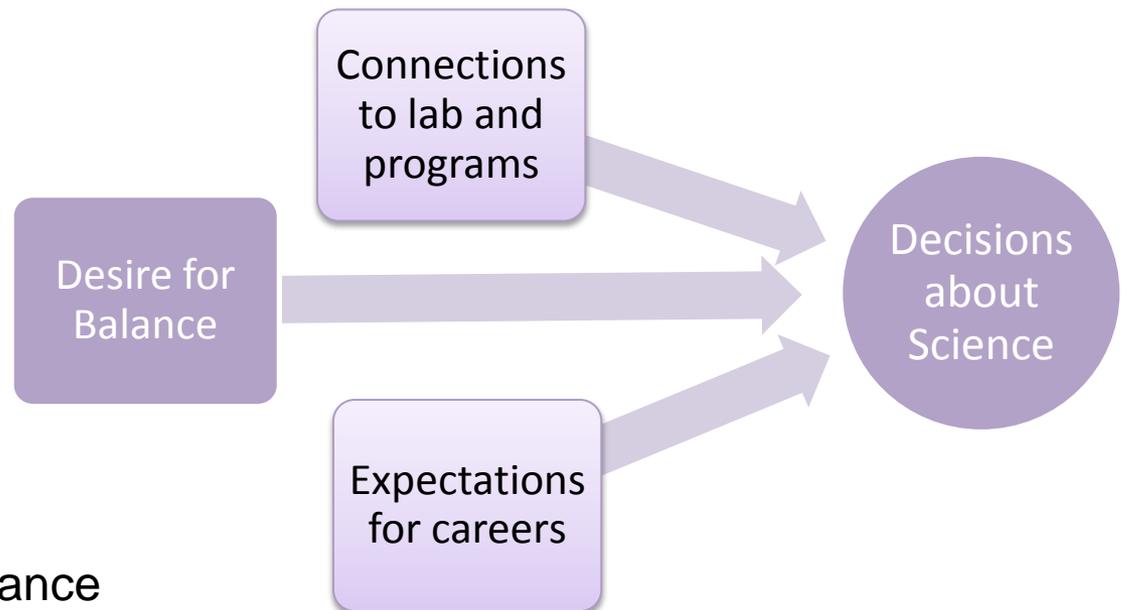
*And, uh, the last rotation, which is the lab I joined, uh, I didn't really...I should say I feel comfortable about the research project they're working on, even though not the best match. Uh, but I feel, like, I, I was taken care of and I, I can talk to the, uh, people in the lab all the time. And I **got support. So that's why I choose this lab.***
(Asian male, married, 2nd interview)



How does a desire for balance play into choosing a dissertation lab and career?

Connections to labs and programs

- Social support
- Networks
- Socialization



Expectations for careers

- Fit with notions of ideal balance
- Scientific interest
- Teaching/research responsibilities



How can understanding students' *dreams of balance* improve programs?

*Well, I think I was just less prepared to take care of so many different tasks. I think if it was just a matter of being able to manage all those things separately or independently of each other, and integrate that all together. **That was the part that I felt I wasn't as prepared as I probably should've been.***

(Asian male, single, 2nd interview)



How can understanding students' *dreams of balance* improve programs?

Balance includes family time and discretionary time

Undergrad programs can:

- Facilitate students in developing strong time management skills
- Aid students in creating strategies to identify, build, and maintain a personally comfortable balance

Graduate programs can:

- Provide meaningful support for students becoming integrated into the school, the program, and the lab
- Make expectations clear
- Support students in extending time management and task prioritization skills
- Address both faculty and student negotiation skills around work-life balance.



How can understanding students' *dreams of balance* improve programs?

Balance matters for women *and men*

Undergrad programs can:

- Mainstream sessions on balance outside of “women in science” programming

Graduate programs can:

- Recognize fathers in “family-friendly” policies
- Treat “work-life balance” as more than a women’s issue
- Listen for, recognize, and serve populations with different needs



How can understanding students' *dreams of balance* improve programs?

Balance matters now, and in future career decisions

Undergrad programs can:

- Provide useful models of working scientists (graduate students, faculty, and industry scientists), with holistic information about work, family, and discretionary time
- Emphasize variety within job category

Graduate programs can:

- Recognize that while many students enter graduate school with a firm idea of what sort of job they might prefer, these choices remain malleable
- Provide meaningful support for ALL student trajectories, not just the PI-bound students



Next Steps

The NLSYBS will continue to follow these students as they move through graduate school and beyond. With this group we will closely examine:

- How does feeling socially integrated into their labs matter in the graduate experience over time?
- As women and men age, enter committed relationships, and begin to have children, how do their dreams of balance change?
- How do lab fit and scientific interest evolve over the course of graduate school?
- How does time pressure and balance play out for students from historically marginalized groups?



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