

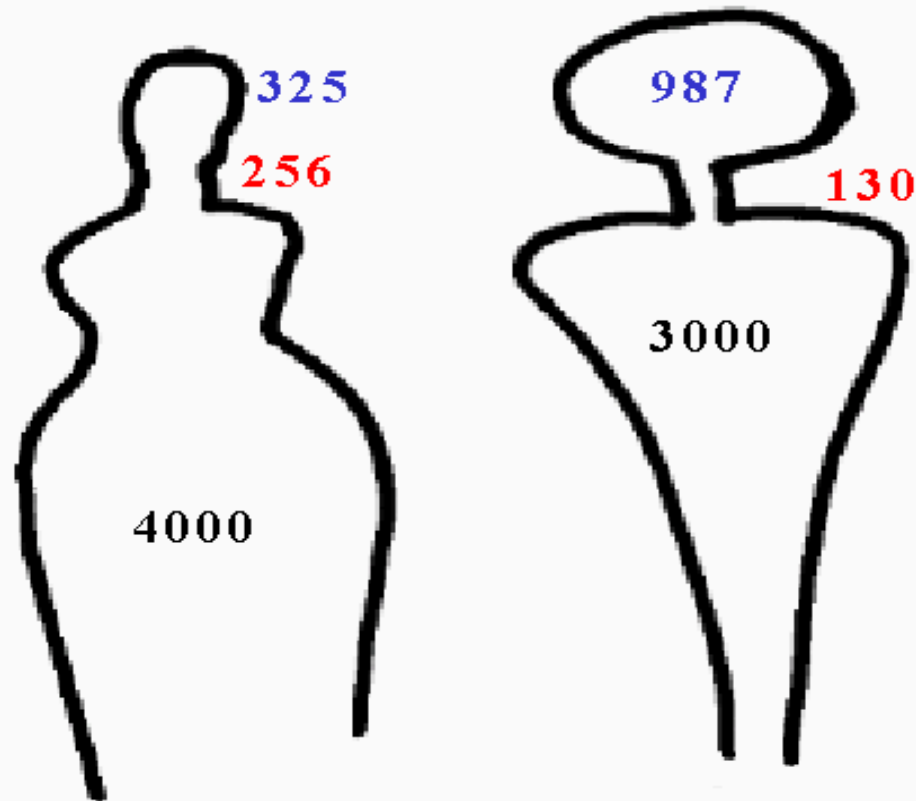
DO BABIES MATTER IN EARLY CAREER?

MARY ANN MASON

PRESENTATION NAS, SEPTEMBER 9

University of California, Berkeley

(2002)



Survey of Doctorate Recipients (SDR)

national
biennial
longitudinal
DATA SET

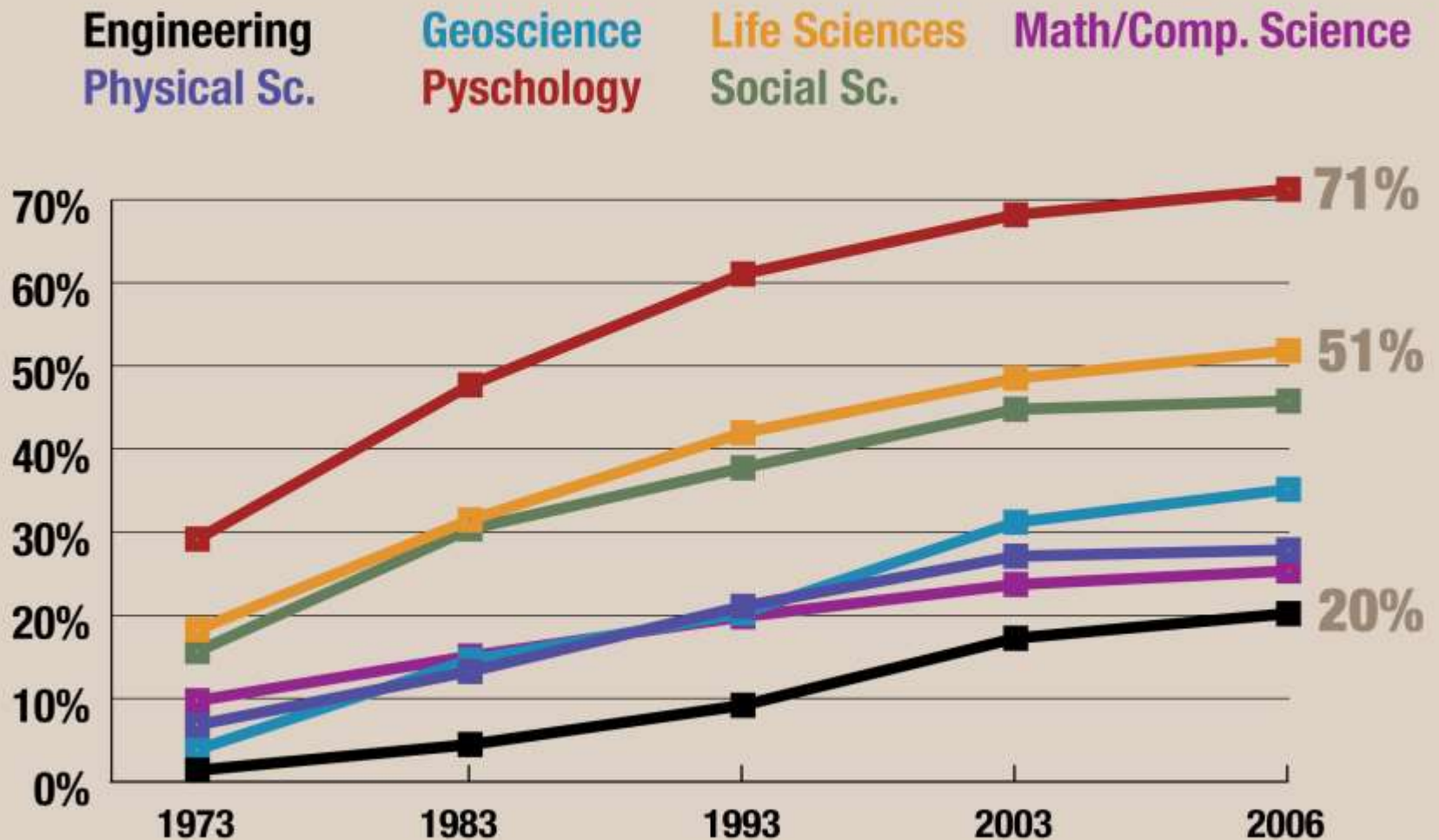


OVER
160,000
PARTICIPANTS

1973

Present

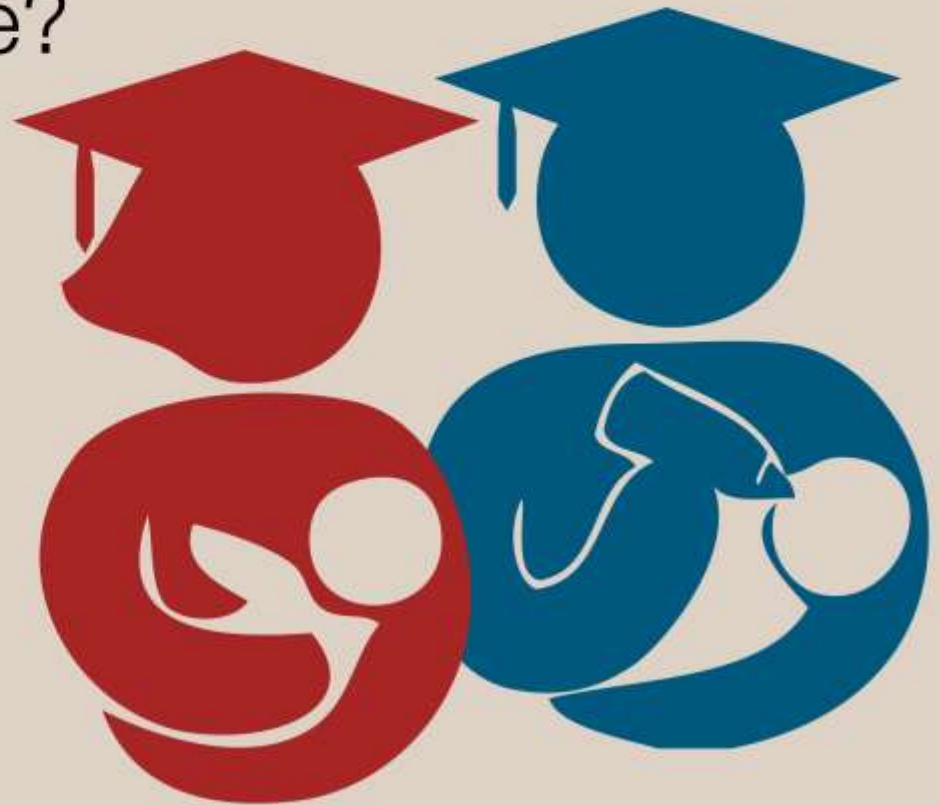
Women as a Percent of Doctoral Recipients in the Sciences



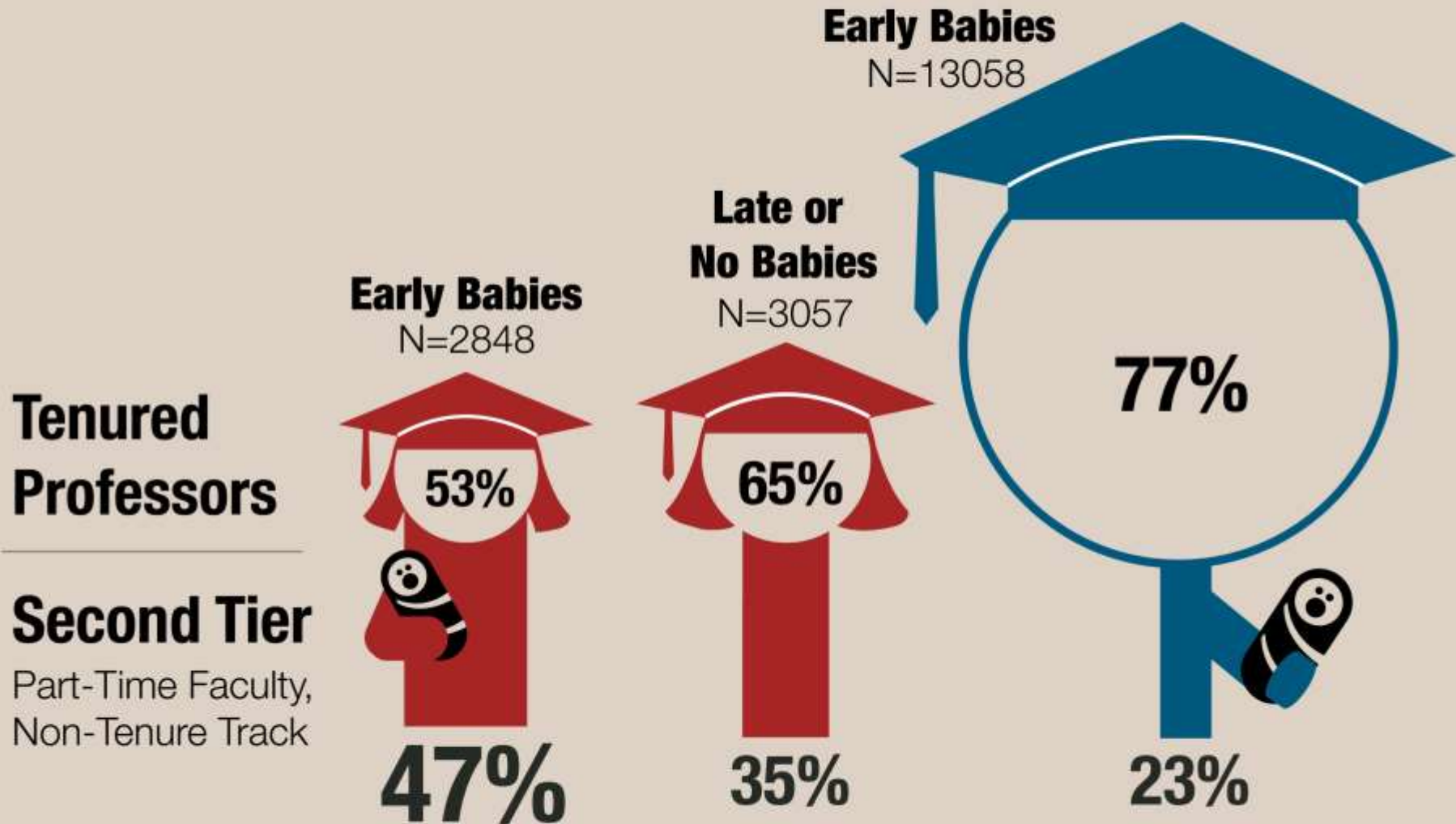
Source: National Science Foundation (NSF), Survey of Earned Doctorates, retrieved from WebCaspar, 4/15/2009.

What Happens to Men and Women After They Get Their PhDs?

How Does Having Babies Affect Tenure?



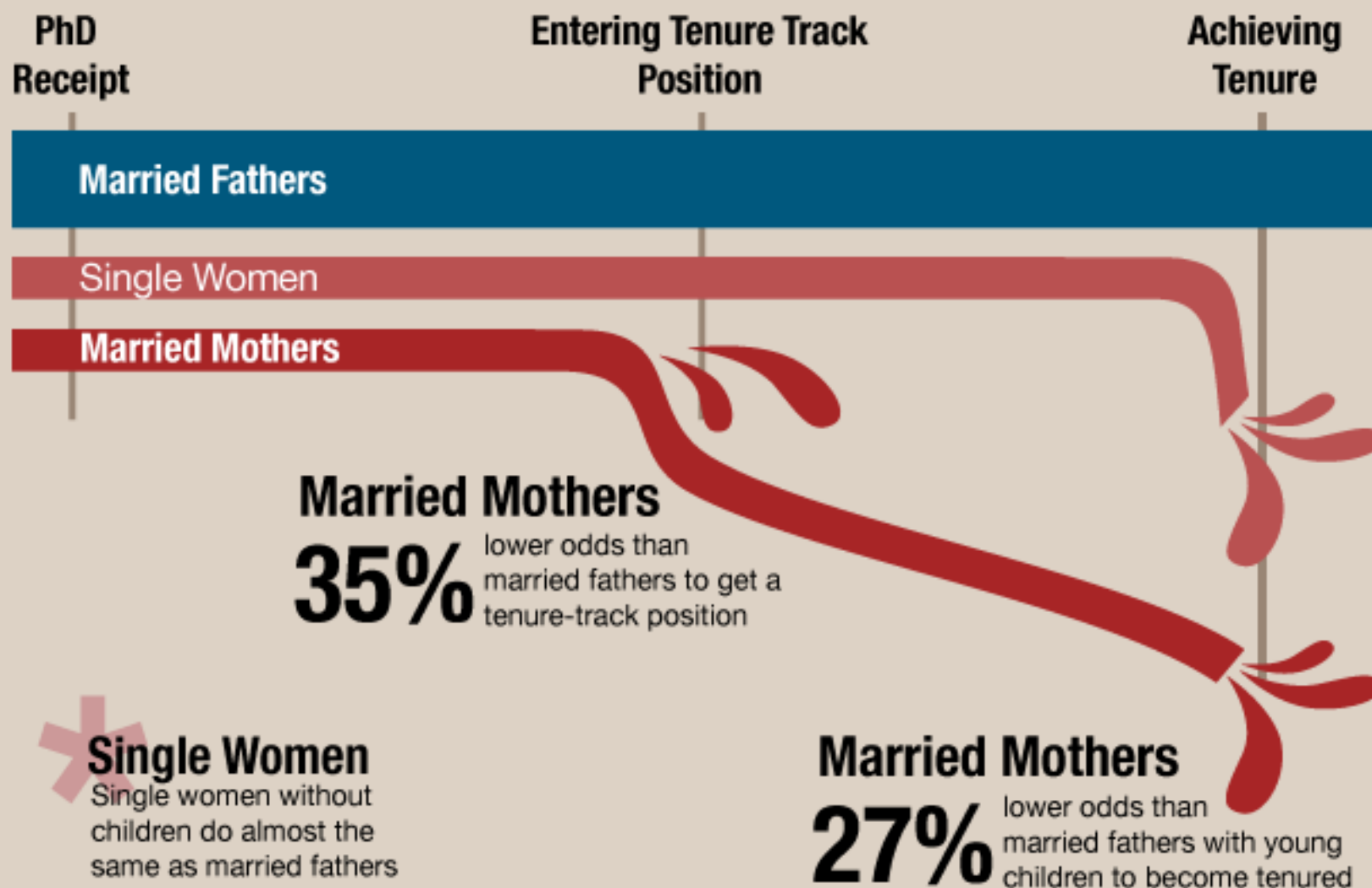
Who Gets Tenure in Science?



Source: Survey of Doctorate Recipients. Sciences and Humanities, 1979-1995.

Note: The use of NSF Data does not imply the endorsement of research methods or conclusions contained in this report.

Leaks in the Pipeline to Tenure for Women PhDs in the Sciences



Married Mothers are
35%
less likely to enter
tenure track jobs



Married Mothers are

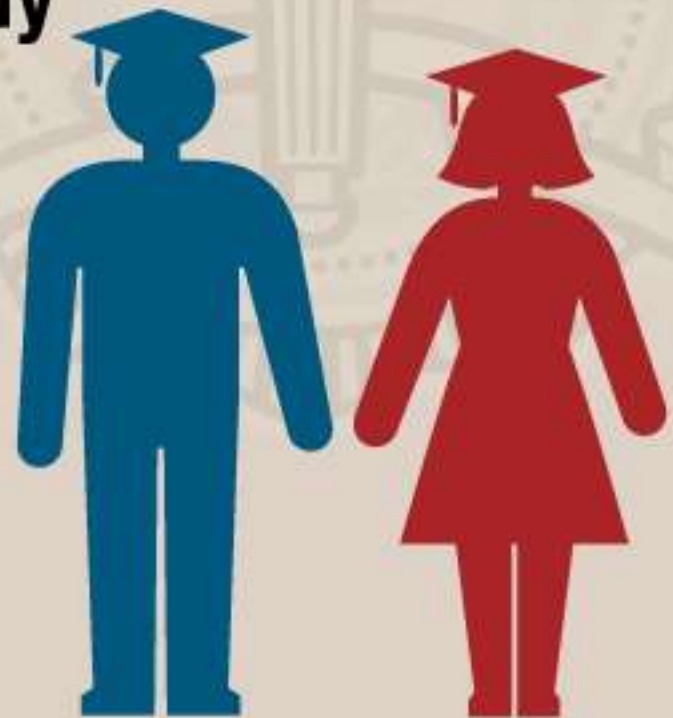
27%

**less likely
to achieve
tenure**



“Postdocs perform a substantial fraction of the skilled work in research labs and are responsible for a disproportionate share of new discoveries. **A 1999 study found that 43% of first authors of research articles in Science were postdocs.**”

➡ *Geoff Davis, author of the Sigma XI Postdoctoral Survey*



Source: NSF-NIH Survey of Graduate Students & Postdoctorates in S&E, 2008; Davis, G. 2006. Improving the Postdoctoral Experience: An Empirical Approach. In R. Freeman and D. Goroff (Eds.), The Science and Engineering Workforce in the United States, Chicago, IL: NBER/University of Chicago Press.

Most postdoctoral positions are limited term

- ➔ Position frequently capped, 5 yrs total.
- ➔ Postdoctoral scholars considered trainees, not employees.
- ➔ Retirement benefits and other benefits are typically limited.



Source: NSF-NIH Survey of Graduate Students & Postdoctorates in S&E, 2008; Davis, G. 2006. Improving the Postdoctoral Experience: An Empirical Approach. In R. Freeman and D. Goroff (Eds.), The Science and Engineering Workforce in the United States, Chicago, IL: NBER/University of Chicago Press.

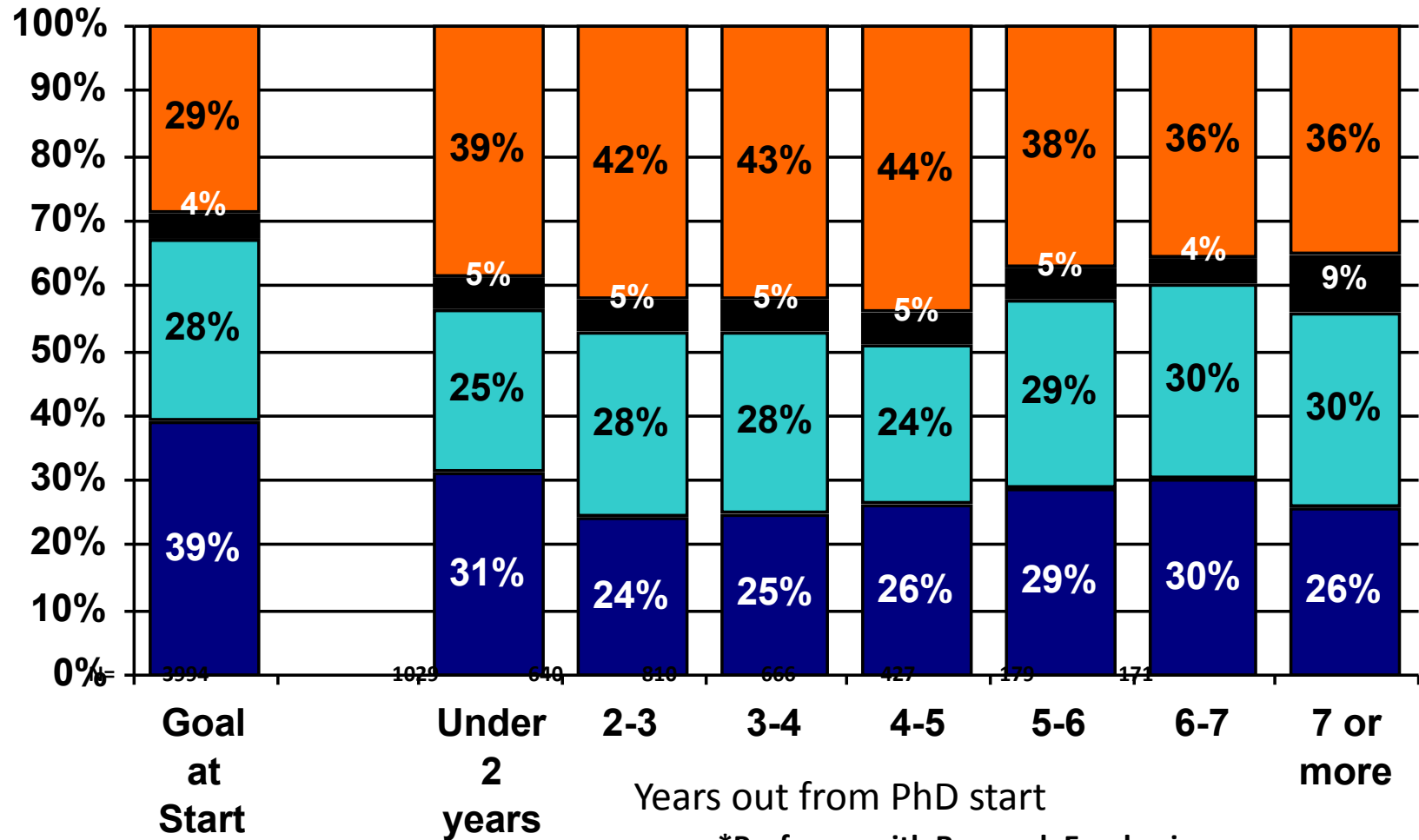
Mothers Often Make Their Decisions Earlier

**Twice as many
women then men
are likely to change their
career goal away from
being a research
professor when they
have babies as post docs**



Career Goal at PhD Start and Current Career Goal by Years out from PhD Start: All UC Women PhD Respondents

■ Prof. (rsrch)*
 ■ Prof. (teach)
 ■ Other Acad.
 ■ Bus., Gov., Other



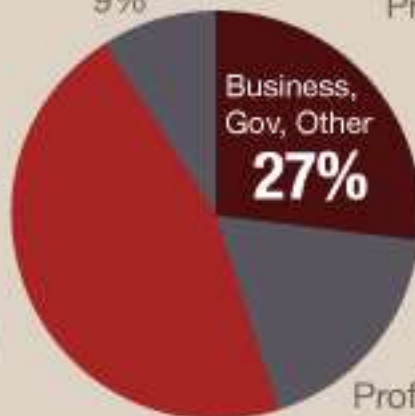
Changing Career Goals



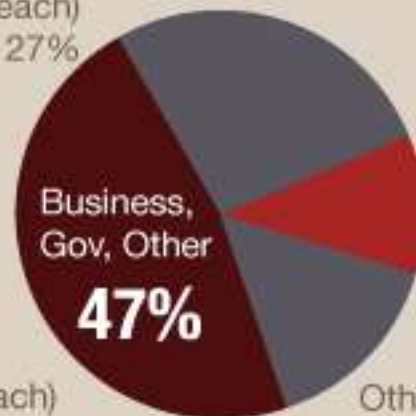
N=45

**Professor
(Research)
46%**

Other Academic
9%



Professor(Teach)
27%



**Professor
(Research)
11%**

Other Academic
15%

CAREER GOAL AT START OF PhD

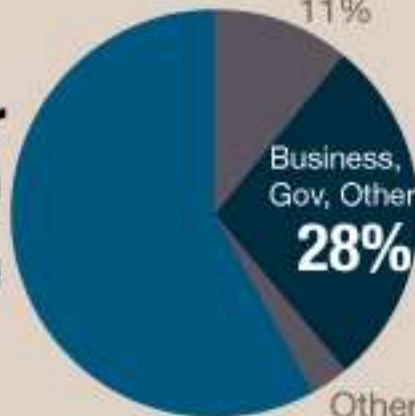
CURRENT GOAL



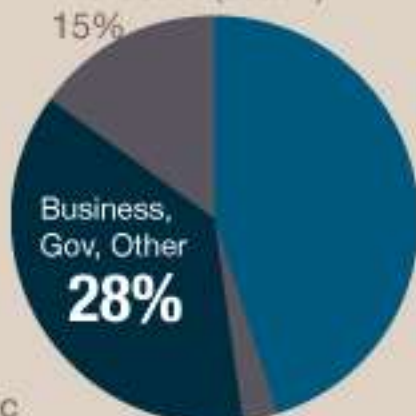
N=62

**Professor
(Research)
58%**

Professor (Teach)
11%



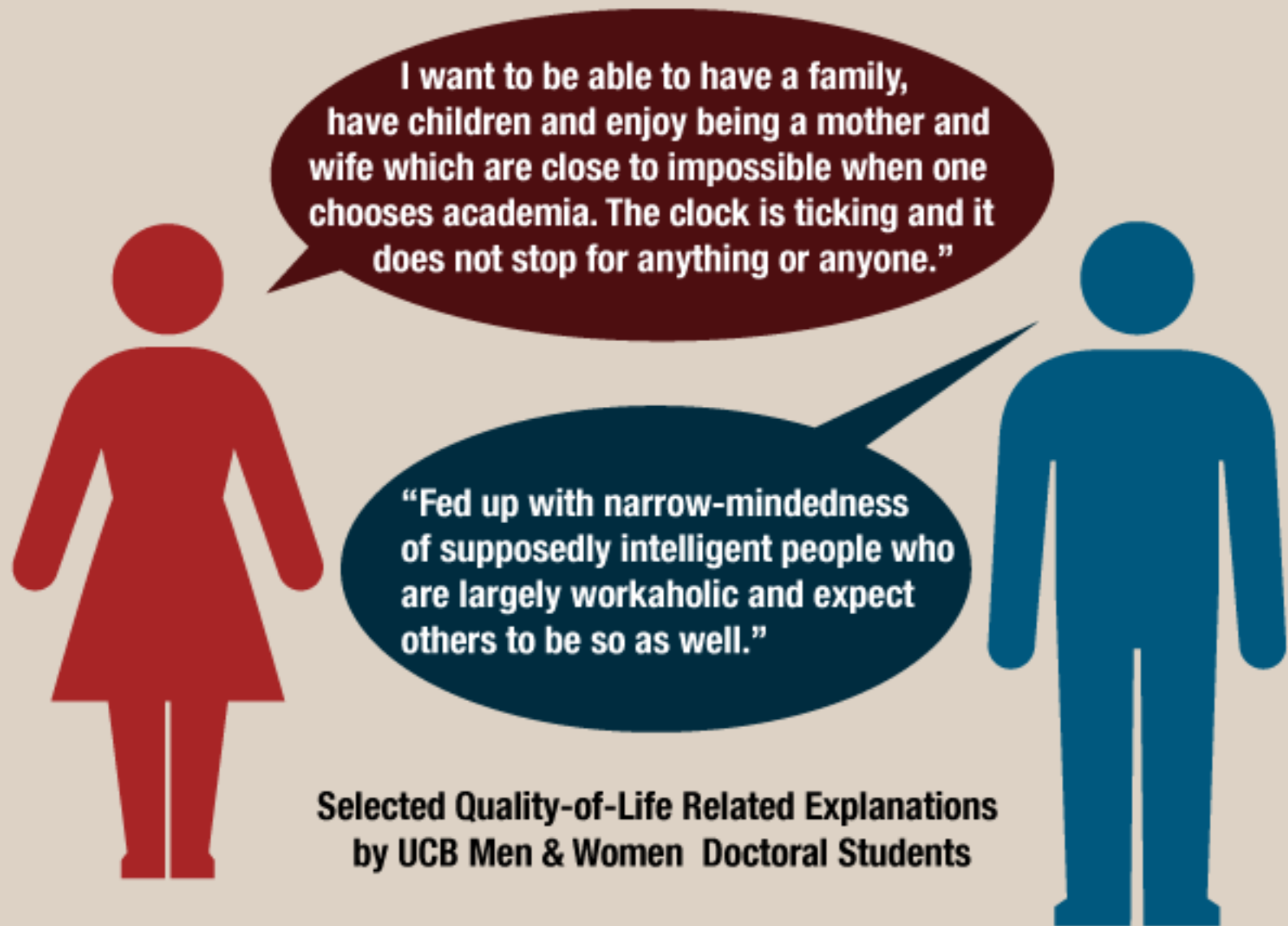
Professor (Teach)
15%



**Professor
(Research)
45%**

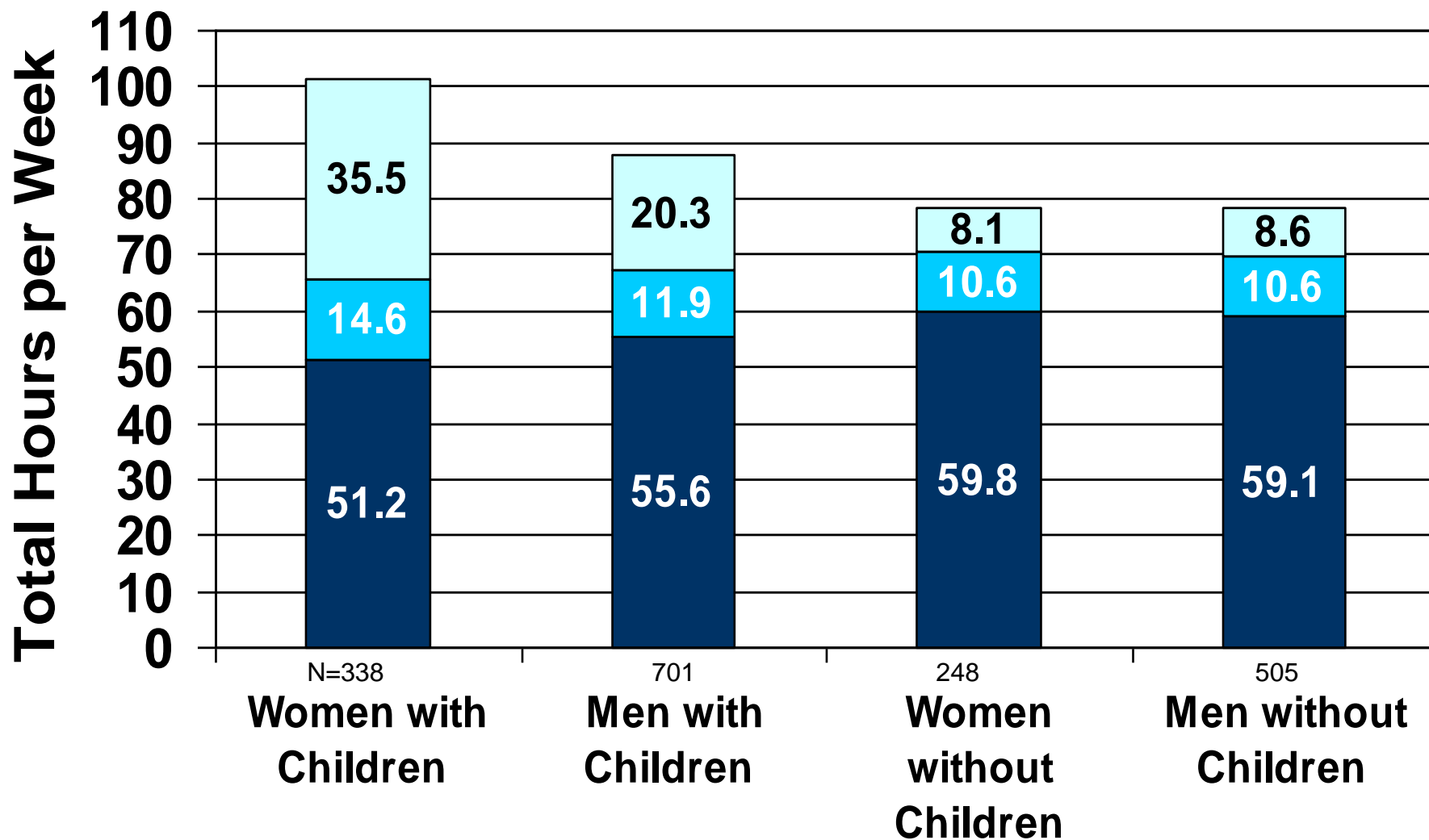
Other Academic
3%

Shifting Goal away from Professor with Research Emphasis

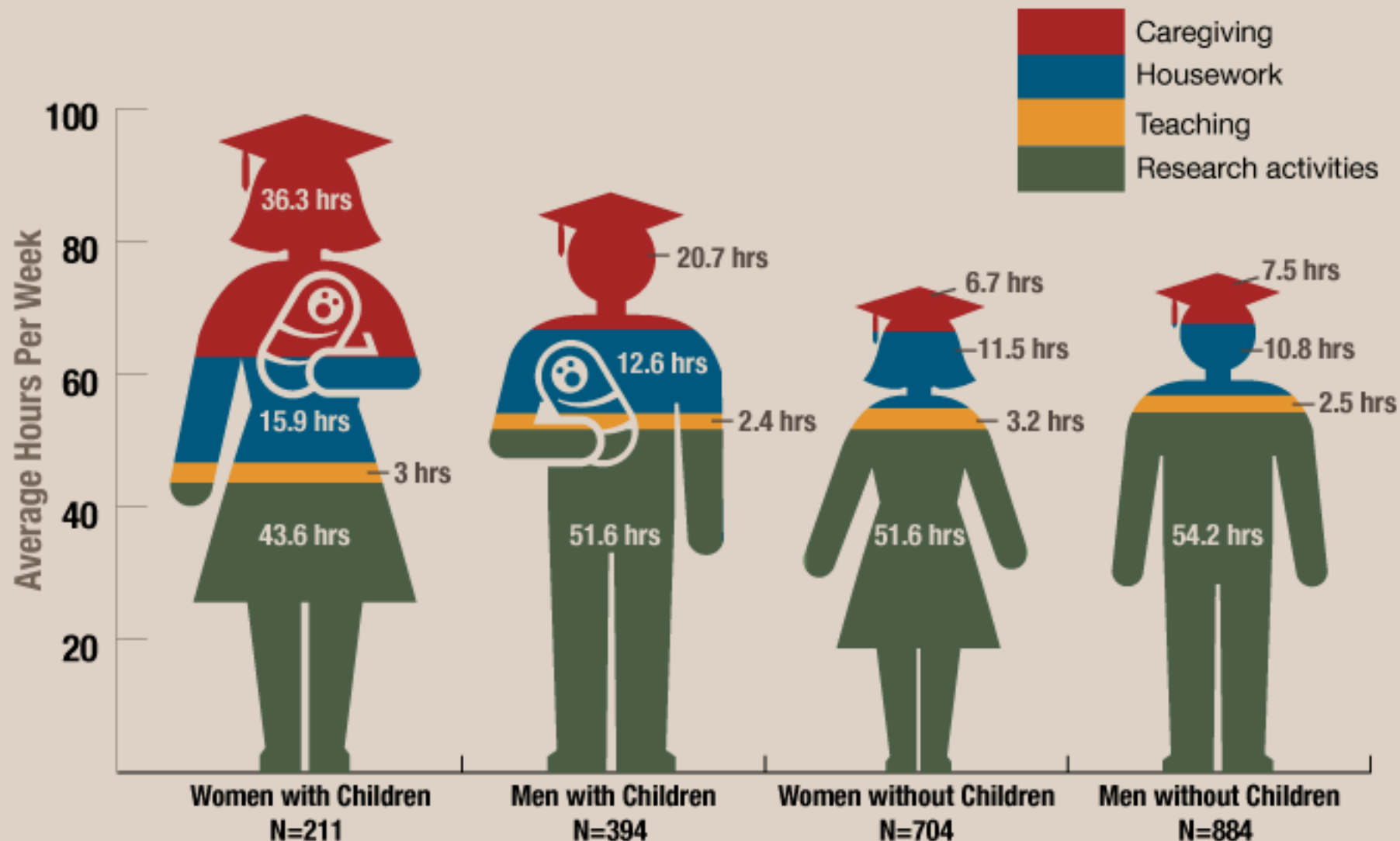


Everybody is Very Busy (*UC Faculty, ages 30-50*)

■ Professional ■ Housework ■ Caregiving

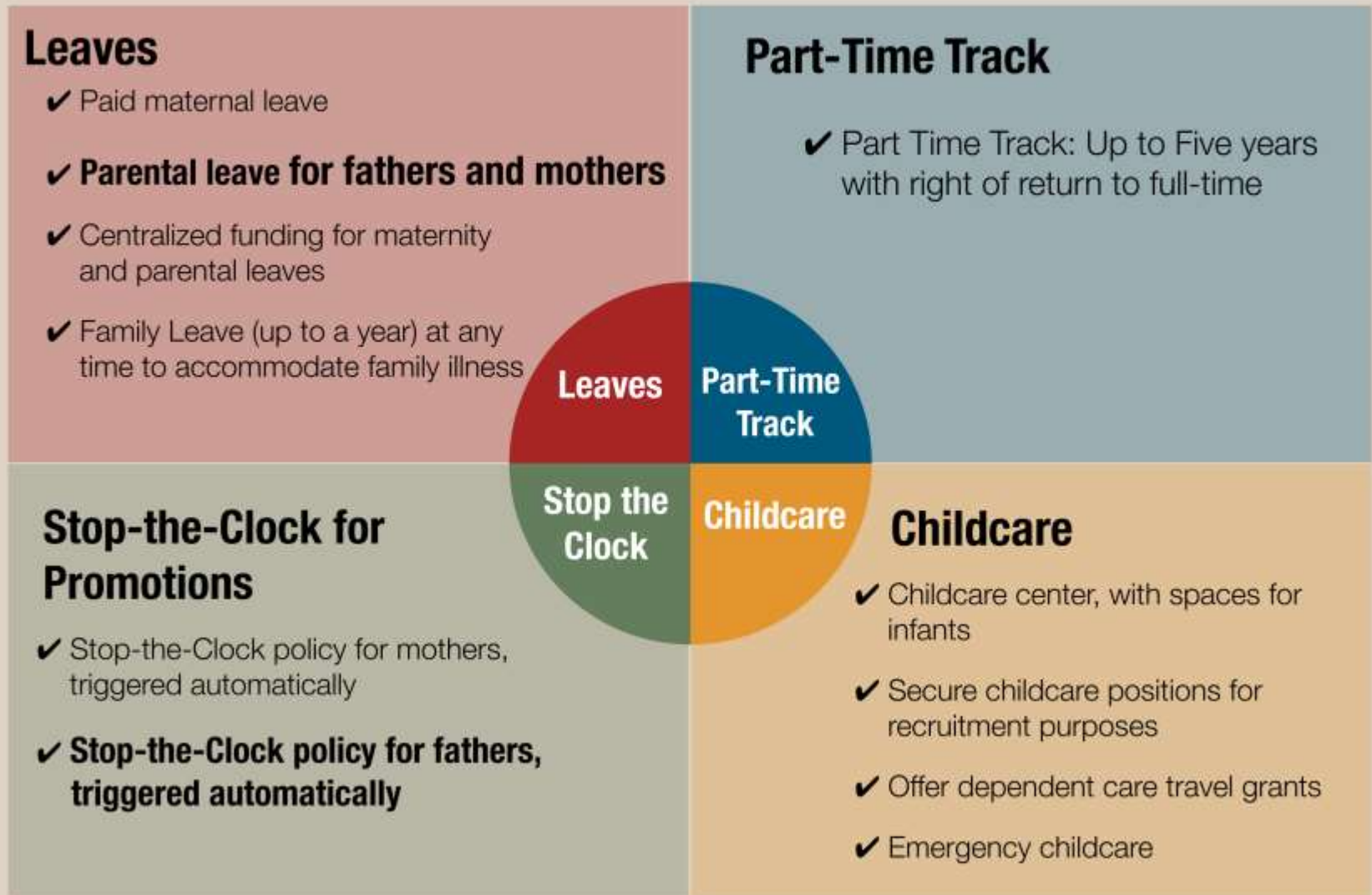


Everybody is Busy (UC Postdoctoral Scholars)



Source: Marc Goulden, Mary Ann Mason, and Karie Frasch. 2009. "UC Postdoctoral Career Life Survey."
(<http://ucfamilyedge.berkeley.edu/grad%20life%20survey.html>).

Workplace Strategies to Stay on the Fast Track



Miscellaneous: Adoption expenses, Lactation rooms

Best Practices

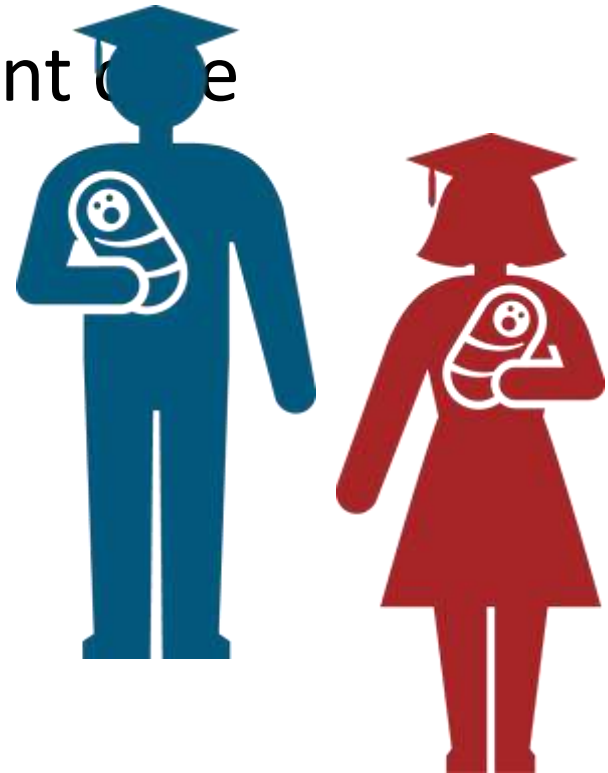
- Paid maternal disability leave
(at least six weeks)
- Parental leave
(For those fathers responsible for at least half of caregiving)
- Stop the Clock (for deadlines, time to completion, grants, etc. for mothers (and eligible fathers))



Best Practices

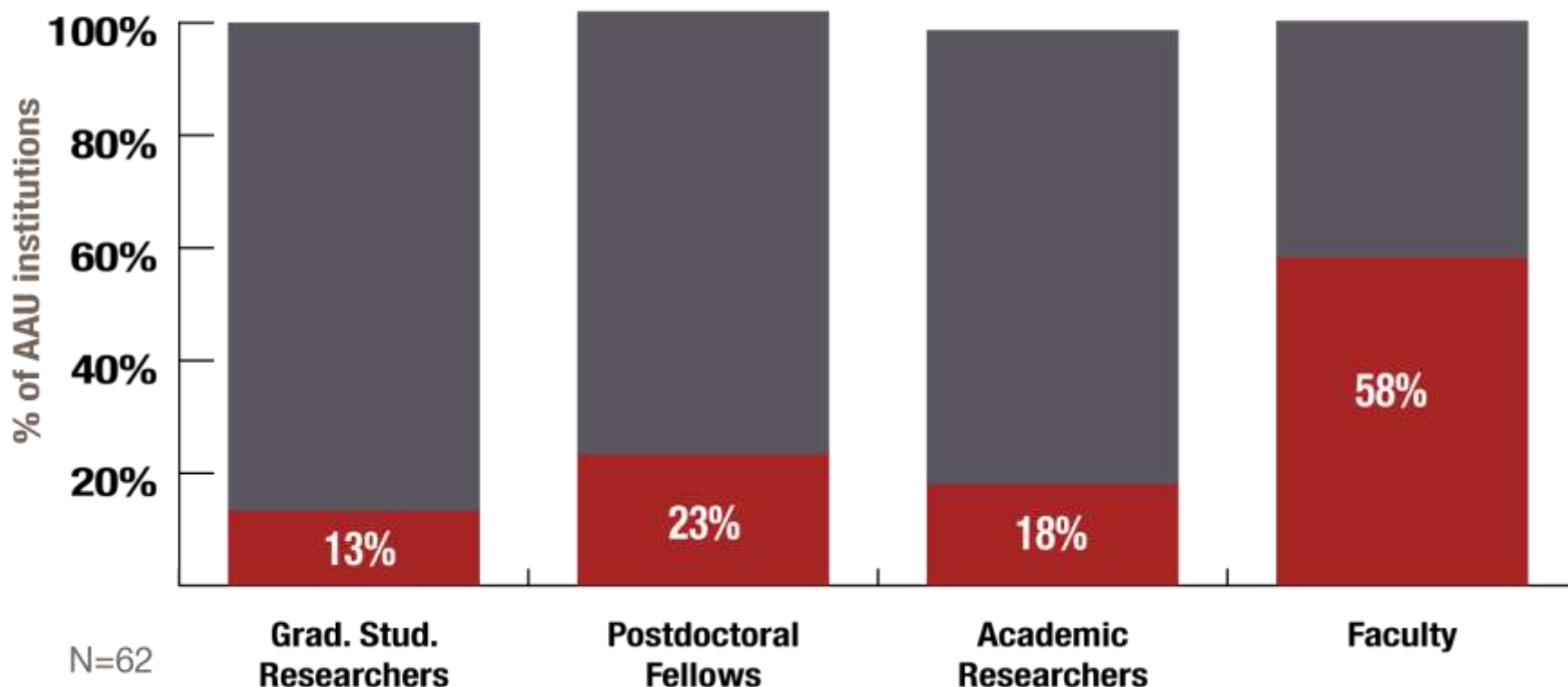
CHILDCARE

- Childcare center, with space for infants
- Offer subsidised dependent care travel grant
- Emergency childcare



Provision of PAID MATERNITY LEAVE for Academic Populations at Association of American Universities (AAU)

Entitlement to at least 6 weeks of paid leave.

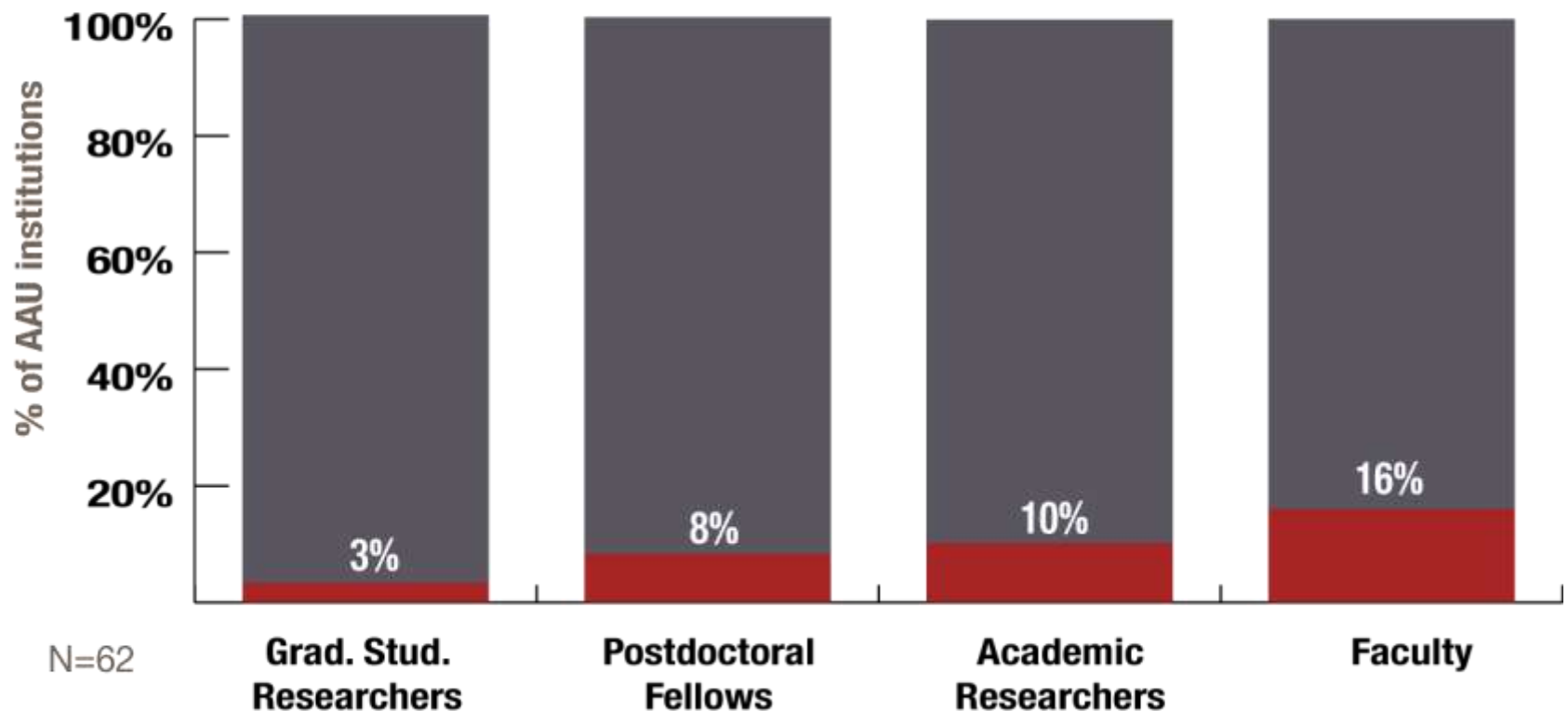


Source: Mason, Mary Ann, Marc Goulden, and Karie Frasch. 2008.

"Family Accommodation Policies for Researchers at AAU Universities Survey."

Provision of PAID PARENTAL LEAVE for Academic Populations at Association of American Universities (AAU)

Entitlement to at least 1 week of paid leave.



Source: Mason, Mary Ann, Marc Goulden, and Karie Frasch. 2008.

"Family Accommodation Policies for Researchers at AAU Universities Survey."

University **Federal Agency Partnership**

SUPPLEMENTS

- ☑ Provide federal Agency or University supplements to offset family event productivity loss and help PIs.

Offer time flexibility in all grants and fellowships to accommodate childbirth.

RE-ENTRY POSTDOCS

- ☑ To Accommodate Time taking for Family Leave

Family Friendly Policies

- ☑ Collaboratively move toward a full package of baseline family friendly practices

Include graduate students postdoctoral fellows in all family friendly policies.

National Science Foundation

Initiatives

- ☑ Allow postponement for one year of grants because of childbirth or adoption.
- ☑ Allow grant suspension for parental leave.
- ☑ Provide supplementary funds to cover the cost of hiring research technicians to maintain laboratories when grant recipients are on family leave.
- ☑ Permit those serving on peer review panels to meet with their colleagues virtually, rather than in person, to reduce child-care needs created by travel.
- ☑ Fund more research on the effectiveness of policies that are designed to keep women in the science pipeline.

Title IX and STEM Fields

“If we’re going to out-innovate and out-educate the rest of the world, we’ve got to open doors for everyone. We need all hands on deck, and that means clearing hurdles for women and girls as they navigate careers in science, technology, engineering, and math.”

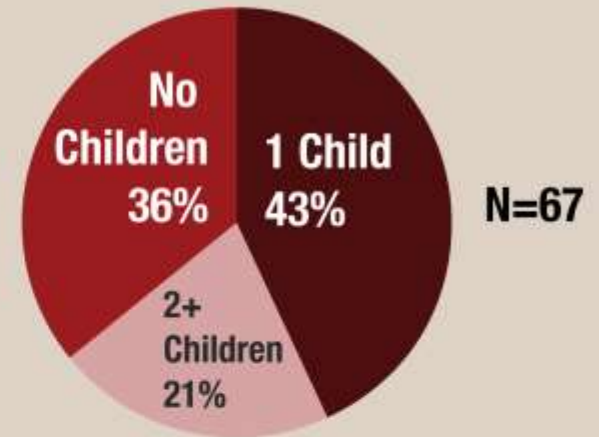
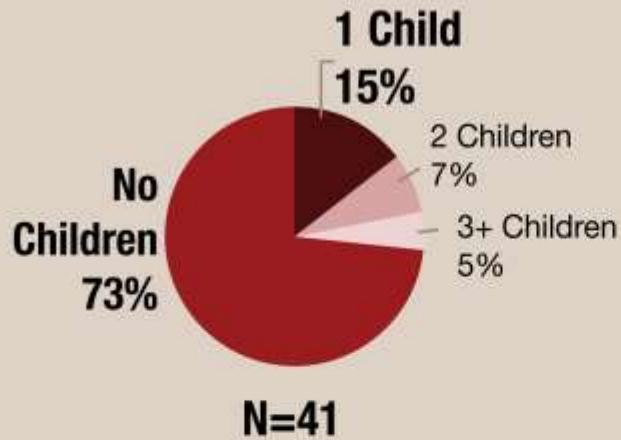
-- First Lady Michelle Obama, September 26, 2011

Pregnancy Discrimination

“A recipient shall not discriminate against any student, or exclude any student from its education program or activity, including an class or extra curricular activity, on the basis of such student’s pregnancy childbirth, false pregnancy, termination of a pregnancy or recovery there from.”

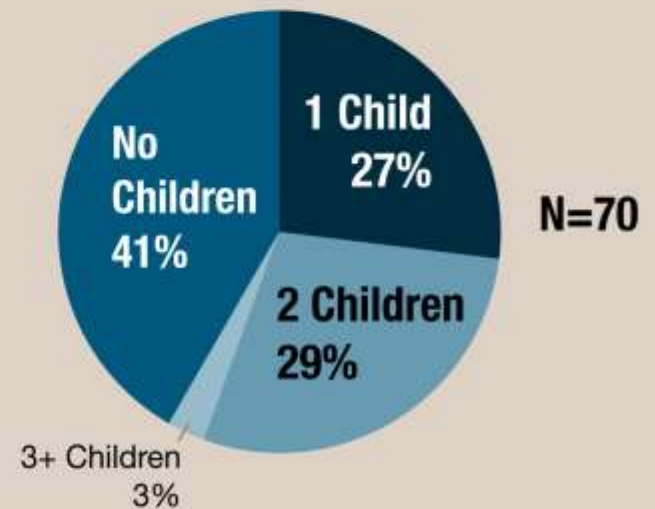
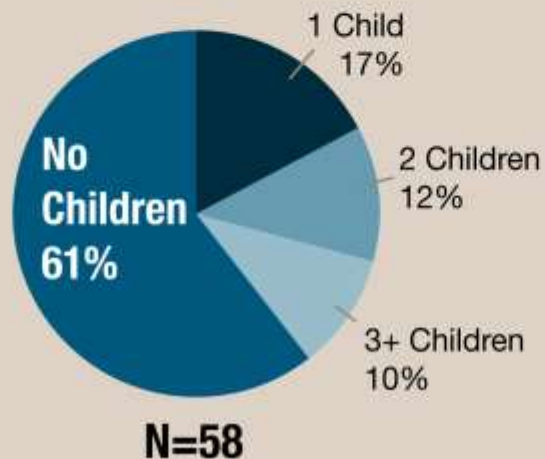
- 1) Education program or Activity
- 2) Employment
- 3) Medical Coverage

of Children born to UC Berkeley Assistant Professors



SPRING 2003

SPRING 2009



Sources: "UC Berkeley Faculty Climate Survey," 2003; "UC Berkeley Faculty Climate Survey," 2009.

DO BABIES MATTER?



**GENDER AND FAMILY
IN THE IVORY TOWER**

**Mary Ann Mason • Nicholas H. Wolfinger
Marc Goulden**



Boosting the Retention of **Women** in the
STEM Pipeline

www.toolsforchangeinstem.org



Mary Ann Mason,
Professor of the Graduate School UC Berkeley and
Faculty Co-Director of the Earl Warren Institute for Law
and Social Policy



Joan C. Williams,
Distinguished Professor of Law and
1066 Foundation Chair at University of
California, Hastings College of the Law

WORKLIFE LAW
UC Hastings College of the Law

In partnership with:

AWIS

ASSOCIATION FOR WOMEN IN SCIENCE

AWIS is today's premiere leadership organization
advocating the interests of women in science and
technology.

Level the Playing Field Workshops

- ▶ Do Babies Matter? I, II, II
- ▶ It's Cheaper to Keep Her
- ▶ Best Practices for Family Friendly Policies
- ▶ Double Jeopardy?: How Gender Bias Differs by Race
- ▶ What Works for Women at Work
- ▶ Some Things are Illegal

It's Cheaper to Keep Her Simulator

Developed by UC Berkeley economists, allows your department or institution to perform a cost/benefit analysis on the presence or absence of family friendly policies, based on the characteristics of the faculty in your own institution or department.

Facilitator's Guides

Complete training guides are available for groups to facilitate their own training sessions using the videos, and additional materials available through our website.

This material is based upon work supported by the National Science Foundation under Grant Number (1106411).