Early Career Doctorates Survey

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National Center for Science and Engineering Statistics (NCSES)
HRS Focus: Science, Engineering, and Health (SEH)

Postsecondary Enrollment Data

Workforce Data

Postsecondary Degree Data
How does achievement in one stage relate to the other stages?

Unknown implications for the U.S. research enterprise, U.S. workforce, and S&E employment markets due to the increasing ...

- Number of postdocs
- Duration of postdoc appointments
- Number of non-U.S. citizens in postdocs
From Postdocs to Early Career Doctorates

Postdoc Data Project

Postdoc Definitions B thru Z Includes All Potential Early Career Doctorates

Early Career Doctorates (ECD) Project
Early Career Doctorates Survey

A national survey to gather in-depth information about U.S. and non-U.S. degreed recent doctorate recipients during the first 10 years of their working careers.

The focus is on transition to the labor market and early-career employment patterns and characteristics.
Selected ECDS Data Items

### Employment
- First position after earning doctorate
- Current position
- Future plans

### Current Position
- Professional activities
- Compensation and benefits
- Professional vs personal life balance
- Mentoring

### Experiences
- Amount of training and guidance
- Opportunities to conduct independent research
- Pathway issues and career transitions
Expected Uses of ECDS

• Population and Employment Statistics
  – ECD counts by sector, discipline, degree type, degree source, compensation, and benefits

  *Monitor trends in the number, type, and status of ECD to inform policy decisions*

• ECD Quality and Experience Indicators
  – Amount of training and guidance; opportunities to conduct independent research and author publications

  *Understand the extent to which ECD research funding is effectively contributing to the goal of enhancing the quality of the S&E workforce*
Expected Uses of ECDS

• Career Transitions
  – Longitudinal information regarding career aspirations, career progression, and career outcomes

*Understand the linkage between early career experiences, particularly postdocs, and longer-term career achievements*
Pipeline to Tenure

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

PhD receipt
Women with young children
-35% lower odds than men with young children to get a tenure-track position
-28% lower than men without young children
-33% lower than single women without young children

Married with young children
-8% lower odds than men without young children to get a tenure-track position

Married without young children
Women with young children
-64% lower than married women without young children
-4% lower than single women without young children

Achieving tenure

*Results are based on survival analysis of the Survey of Doctorate Recipients (a national biennial longitudinal data set funded by the National Science Foundation and others, 1981 to 2003) in all sciences, including social sciences. The analysis takes into account discipline, age, ethnicity, PhD calendar year, time-to-PhD degree, and National Research Council academic reputation rankings of PhD program effects. For each event (PhD to TT job procurement, or TT job to tenure), data are limited to a maximum of 16 years. The waterline is an artistic rendering of the statistical effects of family and gender. Note: The use of NSF Data does not imply the endorsement of research methods or conclusions contained in this report. Person-year N for entering tenure track=140,275. Person-year N for achieving tenure=46,883.
There is no distinct pipeline – education and career movement is better described as flows and pathways.
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