

Appendix A. Technical Documentation

The data analyzed in this report came from the 2013 National Survey of College Graduates (NSCG) by the National Science Foundation's (NSF) National Center for Science and Engineering Statistics.

The NSCG is a longitudinal biennial survey used to study the occupations and career paths of U.S. residents with bachelor's or higher- degrees, particularly in science and engineering fields.

NSCG has been conducted by the U.S. Census Bureau on behalf of NSF since 1993. The 2013 NSCG had a sample size of approximately 144,000 individuals. About 60 percent of the sample was selected from the 2011 American Community Survey (ACS) respondents with bachelor's or higher degrees in any field of study, and represented a sample size of 83,000. The remaining 40 percent of the 2013 NSCG sample were respondents from the 2010 NSCG.

Respondents from the 2010 NSCG were selected from the 2009 ACS and another NSF survey, the 2010 National Survey of Recent College Graduates (sample size of 13,000). Due to this difference in sampling methodology, results from the 2013 NSCG and 2010 NSCG may not be comparable. Earlier data were therefore not included in this report.

The reference time for the 2013 NSCG was the week of February 1, 2013. The weighted response rate was 74 percent. Sample weights were developed by NCSES and adjusted for differences in selection probabilities, nonresponse, and undercoverage, so that inferences could be made to the entire U.S. population.

Definitions of terms and the variable taxonomy used in this report are as follows:

Principle job was defined as the job the respondent worked the most hours during the survey reference week (i.e., the week of February 1, 2013).

Full-time psychologists were operationally defined as individuals who:

- (1) had a doctoral or professional degree in psychology,
 - a. Highest degree type was either a "professional degree" or a "doctoral degree" [variable DGRDG = 3 or DGRDG = 4], and
 - b. Field study of highest degree was "psychology" [variable NDGMEMG = 43], and
- (2) worked at least 35 hours per week in their principle jobs during the week of February 1, 2013.
 - a. Hours per week typically worked was equal to or greater than 35 [variable HRSWK $\geq$ 35]

The NSCG categorizes *degree type* into four categories: bachelor's, master's, doctorate, and professional degrees. According to NCSES, a Ph.D. degree in psychology is categorized as a doctoral degree, and a Psy.D. degree is categorized as a professional degree (NCSES, personal communication, May 12, 2016).

This report only included full-time psychologists. Due to large variations in salaries and work hours for psychologists who worked part-time in their principle jobs, part-time salaries were not included.

Psychologists who worked part-time in both their principle and secondary jobs, even if those totaled 35 work hours or more per week, were excluded from this report. Secondary job characteristics, including salaries, were not reported in the NSCG.

Salaries were based on basic annual salaries of psychologists' principle jobs, presented in nominal dollar figures as they were reported in 2013. Basic annual salaries do not include bonuses, overtime, or additional compensation for summertime teaching or research. Different variables were used in the analysis of salaries per availability of NSCG reported variables, and as sample size allowed. Throughout the report, cells with sample sizes of less than four were suppressed.

Geographic Divisions were based on U.S. Census Bureau's Geographic Divisions:

- East North Central: Illinois, Indiana, Michigan, Ohio and Wisconsin;
- East South Central: Alabama, Kentucky, Mississippi and Tennessee;
- Middle Atlantic: New Jersey, New York and Pennsylvania;
- Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming;
- New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont;
- Pacific: Alaska, California, Hawaii, Oregon and Washington;
- South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia and West Virginia;
- West North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota;
- West South Central: Arkansas, Louisiana, Oklahoma and Texas.

Field of degree was based on variable NDGRMED (code for field of highest degree) and included the following psychology fields:

- General psychology
- Clinical psychology
- Counseling psychology
- Educational psychology
- Experimental psychology
- Industrial/Organizational psychology
- Social psychology
- Other psychology fields

Primary Work Activity was the activity in which an individual worked the most hours and was based on NSCG-categorized work activities as follows:

- Accounting, finance, contracts
- Basic research – study directed toward gaining scientific knowledge primarily for its own sake
- Applied research – study directed toward gaining scientific knowledge to meet a recognized need
- Development – using knowledge gained from research for the production of materials, devices
- Design of equipment, processes, structures, models
- Computer programming, systems or applications development
- Human resources – including recruiting, personnel development, training
- Managing or supervising people or projects
- Production, operations, maintenance (e.g., chip production, operating lab equipment)
- Professional services (e.g., health care, counseling, financial services, legal services)
- Sales, purchasing, marketing, customer service, public relations
- Quality or productivity management
- Teaching

Occupation was based on the NSCG occupation variable N2OCLST. Occupations included in this report are:

- Psychologists
- Medical and health services managers
- Counselors
- Diagnosing/treating practitioners
- Other health occupations, such as registered nurses, dieticians, therapists, physician, health technologists and technicians, etc.
- Pre-college teachers, such as pre-kindergarten and kindergarten, elementary, secondary, and special education
- Psychology post-secondary teachers
- Education post-secondary teachers
- Post-secondary teachers in other disciplines, such as business, health and related sciences, and other social sciences
- Education administrators
- Top-level managers, executives, administrators
- Other mid-level managers
- Other management positions, such as natural sciences managers, engineering managers, etc.

Sectors were based on respondents' reported principle employer information (variable NEDTP) as follows:

- Self-Employed (or a business owner)
 - In a non-incorporated business, professional practice, or farm
 - In an incorporated business, professional practice, or farm
- Private Sector employee
 - In a for-profit company or organization
 - In a non-profit organization (including tax-exempt and charitable organizations)
- Government employee
 - In a local government (e.g., city, county, school district)
 - In a state government
 - In the U.S. military service, active duty or Commissioned Corps (e.g., USPHS, NOAA)
 - In the U.S. government (e.g., civilian employee)
- Other type of employee

Note: the above four sectors exclude educational institutions. Respondents were coded in the educational institutions based on variable EMED (educational institution indicator):

- Educational Institution
 - In a public institution (when respondent was coded in an educational institution as a government employee)
 - In a private institution (when respondent was coded in an educational institution and in the private sector)

Years Since Start of Business (for self-employed respondents) was calculated as the difference between 2013 and the year the self-employed respondents started the position (variable STRTYR)

Types of Educational Institutions were based on variable EDTP (educational institution type) and coded as follows:

- Preschool, elementary, middle, or secondary school or system
- Two-year college, community college, or technical institute
- Four-year college or university, other than a medical school
- Medical school (including university-affiliated hospital or medical center)
- University-affiliated research institute
- Other

Employer Size was based on variable EMSIZE, the number of people working for the respondent's principle employer.

Number of People Supervised was based on variable SUPDIR (Number of people under direct supervision) and SUPIND (Number of people under indirect supervision through subordinate supervisors).

Gender was defined based on NSCG variable GENDER (Female/Male).

Race/Ethnicity was based on NSCG race/ethnicity variable RACETHM and was coded as follows:

- Minority
 - Asian
 - Asian, non-Hispanic ONLY
 - Black
 - Black, non-Hispanic ONLY
 - Hispanic
 - Hispanic, any race
 - Other Racial/ethnic Groups
 - American Indian/Alaska Native, non-Hispanic ONLY
 - Non-Hispanic Native Hawaiian/Other Pacific Islander ONLY
 - Multiple race
- White
 - White, non-Hispanic ONLY

Age Group was based on variable AGEGR, with respondents' reported age coded in 5-year intervals.

Years Since Highest Degree was calculated as the difference between 2013 and the year of award of respondents' highest degree (variable DGRYR).

Disability Status was based on variable HCAPIN (physical disabilities indicator). The variable was derived from responses to the degree of difficulty questions—none, slight, moderate, severe, unable to do—an individual has in seeing (with glasses or contact lenses); hearing (with a hearing aid); walking without assistance; lifting 10 pounds; or concentrating, remembering, or making decisions. Respondents who answered "moderate," "severe," or "unable to do" for any activity were classified as having a disability in the corresponding disability categories - seeing, hearing, walking, lifting, and cognitive disabilities.