

COMMITTEE ON WOMEN IN PSYCHOLOGY

THE CHANGING GENDER COMPOSITION OF PSYCHOLOGY

UPDATE AND EXPANSION OF THE 1995 TASK FORCE REPORT



AMERICAN
PSYCHOLOGICAL
ASSOCIATION

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CONTENTS

ACKNOWLEDGMENTS	vi
EXECUTIVE SUMMARY	1
1 INTRODUCTION AND BACKGROUND	5
Purpose and Structure of the Report.....	7
Method and Data Sources	7
Overview of the Psychology Workforce: Who Are They?	10
Summary.....	11
2 PSYCHOLOGY IN SOCIOCULTURAL CONTEXT	12
Sociopolitical Changes	12
Expansion and Concentration of the Discipline	15
Growth in Work Settings and Activities	16
Robustness of Science and Practice in Psychology	17
Summary.....	18
3 EDUCATION AND TRAINING OF PSYCHOLOGISTS	20
Demographics of Graduate Education	21
Doctoral Degree Attainment in Psychology	25
Degrees Awarded to Women in Psychology Versus Other Fields.....	25
Doctoral Attainment by Gender and Race/Ethnicity	26
Doctorates Awarded in Psychology Subfields	31
Psychology Subfield Changes and Gender	36
Educational Costs, Support, and Student Debt	37
Graduate Tuition	37
Financial Support.....	41
Debt Levels of Doctoral Recipients.....	43
Job Market Perceptions and First Positions Obtained by New Doctorate Recipients.....	46

Trends in Practitioner Training Programs.....	49
Summary.....	54
4 EMPLOYMENT OF PSYCHOLOGISTS	56
Primary Employment Settings and Work Activities	56
Employment Status.....	60
Factors Association With Work Status	65
Compensation	71
Comparison of Psychology With Other Science and Engineering Fields.....	71
Comparison of Salaries Across Industries	76
Salaries Across Employment Settings	79
Cohort Effects in Salaries	81
Academic Salaries	86
Compensation Summary	89
Patterns in Academic Positions.....	89
Women in Graduate Departments of Psychology	90
Academic Ranks and Tenure	90
Academic Leadership	94
Scholarly Leadership.....	95
Patterns in Health Service Provider Positions.....	98
Psychologists in Other Work Settings	104
Summary.....	106
5 PROFESSIONAL ACTIVITIES OF PSYCHOLOGISTS.....	107
APA Membership and Divisional Participation	107
Awards and Honors.....	108
Participation in APA Governance.....	110
APA Central Office Administration and Staff	111
Summary.....	113

6 CONCLUSIONS AND RECOMMENDATIONS	115
Historical Context	115
Data and Data Limitations.....	116
Psychology in Sociocultural Context	117
Education and Training	117
Employment of Psychologists	118
Professional Activities of Psychologists.....	119
Recommendations	119
REFERENCES.....	128

Appendices are available online at <http://www.apa.org/women/programs/gender-composition/index.aspx>

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EXECUTIVE SUMMARY

The report *The Changing Gender Composition of Psychology* (CGC2) updates and expands the 1995 task force report on the gender composition of psychology by the American Psychological Association's (APA's) Committee on Women in Psychology (CWP). The CGC2 report provides current data and recommendations in four key areas: (a) psychology in sociocultural context, (b) education and training of psychologists, (c) employment of psychologists, and (d) professional activities of psychologists. Within each chapter, we pay particular attention to issues in academic and health provider settings as well as to multiple intersections of identity.

Summary of Major Findings

The CGC2 report provides four main points of focus regarding the changing gender composition of psychology. The data presented in each area demonstrate that women in psychology continue to experience a manifest lack of parity with men in many critical areas. Many aspects of the CGC2 report describe factors at the individual level in terms of women's characteristics or choices women make. We recognize that these factors exist within a sociopolitical context that also constrains women's choices.

Psychology in Sociocultural Context

Psychology as a field and APA as an organization continue to diversify. Psychologists are entering diverse employment sectors and settings. For example, in the health services sector, expansion is dramatic. Other growth areas include primary and secondary education, research, and the number of licensed practitioners. However, subsequent chapters in the CGC2 report provide data indicating that although women constitute the majority of psychologists (in the educational pipeline, in the workforce, and in APA professional activities), they lack equity with men in terms of power, status, and salary. The data are mixed on progress during the past 20 years and on projections for future progress. (See the Psychology in Sociocultural Context section in the CGC2 report.)

Education and Training of Psychologists

Women represent the source of greatest growth for graduate education in psychology. As predicted in the 1995 report, most (up to 80%) health service provider-related programs are composed of women students, a demographic trend that is highly likely to continue. Although the growth of the field of psychology has been energized primarily by women, especially racial/ethnic minority women, academic programs and training requirements have not shifted to match the sociocultural needs of this changing demographic. A major concern is the number of women who may graduate with significant student debt and low starting salaries. Over time, debt combined with the wage gap discussed below perpetuates gender-based inequity, limits opportunities for career development, undermines contributions to science and practice, adds to stress for women and their families, and may reduce women's ability to save enough money for retirement.

There is limited research on educational experiences in psychology's pipeline that disadvantage women. Targeted data collection efforts for future workforce studies should include variables related to mentoring, classroom experiences, microaggressions and harassment, mathematics performance, career aspirations, and educational climate. (See the Education and Training of Psychologists section in the CGC2 report.)

Employment of Psychologists

Women in psychology face the same disadvantageous conditions as women in the overall U.S. labor force. Women in psychology continue to experience lower salaries, greater wage gaps, and an increasing average student loan debt than men in psychology and also compared to women in other sciences. On average, it takes women 1 year more than men to achieve tenure. Despite the influx of women into the profession, they remain underrepresented at the ranks of associate and full professors as well as in institutional leadership. In health service provider subfields, more women than men are in independent practice and employed part-time, although commitment to their career is high. Government agencies may be one setting where women psychologists thrive because women constitute the majority of psychologists employed in government agencies. Yet, unanswered questions are how occupational segregation, wage gaps, part-time employment, marriage, motherhood, and other barriers to advancement interact to influence and constrain the choices women make and the constraints they face—obviously critical issues in need of research. (See Employment of Psychologists section in the CGC2 report.)

Professional Activities of Psychologists

The gender composition of APA membership has significantly changed since the last report. In 2002, slightly more women than men belonged to APA. By 2013, women made up 58% of the membership. Women now hold more than half of APA governance positions, and women APA staff have increased across all job levels and categories. This last shift highlights that only very recently have women been in positions to influence judgments regarding merit, organizational priorities, training standards, ethics, and standards. Despite gains in membership, governance, and staff positions, women continue to be underrepresented in positions of formal influence and authority. For example, of the 40% of the women psychologists involved in the scientific review process of APA journals, most hold ad hoc reviewer positions. Women still represent only 18% of APA journal editors. In addition, women remain underrepresented in the association's top honors and participation in divisions. (See the Professional Activities of Psychologists section in the CGC2 report.)

Summary of Recommendations for APA Action

The Committee on Women in Psychology (CWP) and APA Visiting Scholar Ruth Fassinger, PhD, developed the following recommendations with input from the report's Advisory Committee. These actions are important because (a) CWP's long-standing core values include collaboratively achieving the empowerment of underrepresented groups, (b) it is in the best interest of the field of psychology to foster and maintain a diverse spectrum of perspectives and expertise, and (c) reports without action are meaningless.

Immediate action to remedy representation of women in prestigious positions strengthens the integrity of the association and the field. APA is the primary professional home for many psychologists, and it is the public face of psychology in society. The association is responsible for promoting educational and workplace equity within the next decade. We provide a set of broad but actionable recommendations, corresponding to chapters within the CGC2 report. The data available for the CGC2 report were limited. To this end, CWP recommends that the Center for Workforce Studies and APA identify data needed to address the recommendations in the CGC2 report and support efforts to collect, analyze, and report such data.

Psychology in Sociocultural Context

CWP recommends that APA governance ensures that the CGC2 report and recommendations be discussed with divisions, committees, and boards with specific interest in these issues, including those that focus on graduate students, early career psychologists, the public interest, teaching of psychology, women, men, underrepresented groups, workforce studies, and others. Results of these discussions, and steps determined for action by these groups, should be reported to CWP.

CWP recommends the following:

- The CGC2 report should be disseminated beyond APA to mobilize critical conversations about gender equity and change. APA should make results of the CGC2 report available to the general public and to teachers of psychology, including opportunities for dissemination via social media, peer-reviewed literature, lay publications, and other relevant venues.
- APA should collect data on diverse individuals to understand how the changing composition of gender in psychology affects diverse groups, with particular emphasis on wage gaps, leadership opportunities and roles, and education and training. Data should allow for analyses of intersecting identities beyond gender and race/ethnicity for relevant research questions.

Education and Training

- CWP recommends that the Office of Program Consultation and Accreditation in conjunction with APA Governance establish mechanisms to collect data on (a) students' decision-making process to pursue professional certificates as well as undergraduate, master's, PhD, or PsyD degrees and (b) health service provider options versus other fields across individual characteristics (e.g., race/ethnicity, gender, family status, practice vs. academia and other fields).
- CWP recommends that APA fund research on effective interventions and factors that influence decision making through APA grant mechanisms.
- CWP recommends that APA continue to work with the federal government regarding federal funding for student, trainee, and early career psychologists (e.g., National Research Service Awards, National Health Service Corps) and student loan repayment (e.g., National Institutes of Health Clinical Researcher Loan Repayment Program) that includes both scientists and practitioners.

Employment of Psychologists

- CWP recommends that APA work to eliminate the wage gap by (a) collaborating with other relevant organizations to raise awareness of and advocate for gender wage equity in psychology (e.g., an *American Psychologist* special issue could explore factors that maintain the wage gap and highlight initiatives in organizations that have minimized or reduced the gap); (b) advocating for federal and state policies that encourage salary transparency; (c) creating a multi-institutional task force, led by APA, to develop an approach to address multiple psychology gender wage gap issues identified in the CGC2 report; and (d) monitoring yearly progress with data that will reveal the direction of trends observed in the report, particularly in the area of wage gaps.

- CWP recommends that APA identify and eliminate barriers to promotion in academia by using a multi-institutional task force, led by APA, to develop an approach to address (a) underrepresentation of women in academic leadership positions, (b) underrepresentation of women at the full professor rank, (c) slow career paths and revolving door effects that tend to keep women clustered at the assistant and associate professor level, and (d) overrepresentation of women in part-time and other contingent positions versus full-time and tenure track positions.
- CWP recommends that APA identify individual, institutional, and societal factors that influence leadership in science by (a) promoting research on effective interventions to both increase leadership skills among underrepresented women and to facilitate mentoring and support for women in leadership positions; (b) identifying factors that contribute to decision-making processes regarding career choices, including anticipated student loan debt, job-related activities, and hours worked; (c) funding research on effective interventions and factors that influence decision making through APA grant mechanisms; and (d) promoting funding for research on effective interventions and factors that influence decision making through the science directorate.

Professional Activities of Psychologists

CWP recommends that APA expand convention programming on the pathway to editorship, the logistics of being an editor, and how to identify and pursue editorial opportunities, including components specific to women, minorities, and other groups who face barriers. CWP recommends that the APA Public Interest Government Relations Office continue to support key workforce policies that intersect with the field of psychology and create a formalized advocacy mentorship program to increase the professional advocacy skills of women and other minority groups to address inequities. CWP recommends that APA collaborate with other organizations that support students and trainees (e.g., American Association of University Professors, American Association of University Women, National Postdoctoral Association) to ensure psychology is at the table and can provide scientific expertise associated with issues important to psychologists, such as child care support, benefits, resources for parents in graduate school and postdoctoral training, and the rising cost of tuition and resources on student loan management.

The CGC2 report updates and expands the 1995 task force report on the gender composition of psychology by APA's CWP by providing current data and recommendations. More specifically, the report identifies areas of improvement and areas for continued advocacy for more equitable practices. Thus, the findings and recommendations of the CGC2 report can serve as a critical platform to move the discipline forward, and we intend the report to serve as "call to action." To that end, the CGC2 report is data rich. As a result, it provides comprehensive data to support each major chapter. It will serve as a major resource to respond to the problems outlined within its pages.

The full CGC2 report is available online at <http://www.apa.org/women/programs/gender-composition/index.aspx>.

1 INTRODUCTION AND BACKGROUND

The 1995 *Report of the Task Force on the Changing Gender Composition of Psychology* represented the results of an effort by the American Psychological Association (APA) to determine the significance and implications of the “feminization” of the field—that is, the substantial increase in the number of women entering the discipline of psychology from the late 1970s through the early 1990s (APA, 1995; Pion et al., 1996)—based on concerns that large influxes of women into psychology might precipitate declines in the field’s status and prestige. The 1995 report presented a brief “herstory” of the place of women in psychology: a discussion of the contextual (sociocultural, legal, and economic) changes that were thought to have contributed to the observed shifts, the gender composition and distribution patterns in both graduate education and employment of psychologists at the time, and data regarding the status of women within APA as a professional organization. The report found evidence that changes in psychology as a discipline appeared to be driving the gender shifts, and it offered several recommendations in the areas of public information, advocacy, leadership, education, and training aimed at ensuring both the robustness of the field and women’s success within it. Recommendations called for follow-up data collection and examination as well as continued monitoring of gender-related patterns in the profession of psychology over time; the APA Women’s Programs Office (WPO) and the Committee on Women in Psychology (CWP) were given responsibility for oversight of follow-up activities.

The current update and expansion of the 1995 report was launched when CWP members Drs. Cynthia de las Fuentes and Joan Chrisler as well as the WPO Senior Director, Dr. Shari E. Miles-Cohen, drafted a proposal titled “Request for APA Funding for Follow-Up Analyses on the Changing Gender Composition of Psychology.” The proposal was submitted to Dr. Steve Breckler, Executive Director of the Science Directorate, in response to the 2012 Strategic Fund Initiative and utilized data compiled primarily by the APA Center for Workforce Studies (CWS). This update builds on the 1995 report by presenting current data regarding the status of women and men in psychology as well as trend data to demonstrate patterns of stability and/or change over the approximately two decades since the original report. This report expands the original report. It is built on the great quantity and variety of data sources now available for analysis. Thus, it can address areas of diversity in the population of psychologists of interest in identifying potential status issues for diverse women and men in the psychology workforce of the future.

Like the 1995 report, this report is grounded in roots of social justice. The Committee on Women in Psychology was created following substantial efforts in the late 1960s and early 1970s by APA foremothers outraged at blatant injustices against women in APA (APA, 1995; Chrisler et al., 2013). The committee was to function as a catalyst by means of interacting with and making recommendations to the various parts of APA’s governing structure (Russo & Denmark, 1987). The goals of the committee were to (a) promote the health and well-being of all women and girls, nationally and internationally; (b) identify and eliminate discriminatory and exploitive practices against all women and girls, nationally and internationally; (c) promote the unique contributions of women to psychology; (d) enhance women’s leadership within and outside APA; (e) monitor activities of groups within APA to assess the impact on women; (f) collaborate with others as needed to achieve the empowerment of underrepresented groups; and (g) promote advocacy on public policy relevant to women, nationally and internationally. CWP has a long-standing focus on eliminating inequities in many areas addressed in this report, including inequity in education, hiring, compensating, evaluating, and promoting women; ensuring equitable opportunities for publication of scientific articles about women; and representation of women in leadership and honorable roles, including as decision makers, journal editors, APA Fellows, and award winners (Chrisler et al., 2013).

Accordingly, gender is conceptualized in this report not as a binary characteristic but as an institutionalized system of social practices (Ridgeway, 2001). These social practices, including men’s and women’s beliefs

about gender, shape assertiveness, influence, and evaluation of individuals in ways that often penalize women (Ridgeway, 2001). The data here serve to update the work of the 1995 report to identify areas that have improved and opportunities to continue to advocate for more equitable practices.

The chapters in this report and their focus are presented next.

CHAPTER 2 addresses the sociocultural context of the changing gender composition of psychology, and it answers the following questions:

- What is the impact of legislative advances and setbacks that have affected legal standing of women and underrepresented minorities in the workplace?
- What is the impact of sociopolitical changes (e.g., nearly 15 years of the United States engaging in war, unmet need for mental health treatment, increasing use of psychiatric medication, expanding managed care, and increased strategies to correct gender-based workplace inequities)?
- How have changes in academia affected the gender composition of psychology?

CHAPTER 3 addresses the education and training of psychologists, and it answers the following questions:

- What is the impact today of continuing changes in the gender composition of psychology in terms of education and training, employment, and compensation?
- What are the data by gender, race/ethnicity, age, sexual orientation, and ability/disability status on who attends master's and doctoral programs (both Doctor of Philosophy [PhD] and Doctor of Psychology [PsyD]), and how do issues of cost and flexibility relate?
- How have tuition and student loan debt changed over time, and what is the impact of that change on the field?
- Are there differences between PhD and PsyD health services providers on these issues?

CHAPTER 4 addresses employment of psychologists and master's-level psychology associates, and it answers the following questions:

- What are job settings, specialization, and roles for individuals trained as psychologists?
- What are salaries for psychologists, including by gender, race/ethnicity, age, sexual orientation, and ability/disability status, and how does salary affect the changing gender composition of the discipline?
- Are there gender differences in representation in leadership positions in academic, health service provider, and other settings?

CHAPTER 5 addresses the professional activities of psychologists, and it answers the following questions:

- What are data by gender, race/ethnicity, age, sexual orientation, and ability/disability status on APA membership, division membership, participation in APA governance, and APA central office staff?
- What do changes in membership and leadership mean for the future of the profession of psychology, including recruitment and retention of members and average age of the APA membership?
- What do these changes mean for leadership within APA?

Note that there are many other questions that could be informative for which we did not find adequate data sources (e.g., some questions about bachelor's-level psychology majors and the pipeline to graduate school). Furthermore, the data sources accessed in this report have only assessed gender in a binary dimension (i.e., men/women), and they do not address other levels of gender diversity—such as sexual orientation as well as transgender and nonbinary gender identity—and so we were unable to address this aspect of gender composition in our report (Renn, 2010). In those situations, the state of current data has been identified within the report, and recommendations have been provided for future data collection.

Purpose and Structure of the Report

A workforce analysis should provide information about the current distribution of workers in a particular segment of the workforce (including conditions that may affect patterns of attrition over time), and it should examine the educational pipeline to gauge future supply of new workers so that gaps or mismatches between supply and demand in the segment of the workforce can be noted (Rozensky, Grus, Belar, Nelson, & Kohout, 2007). This report documents such aspects of the psychology workforce specifically as they relate to gender.

For comparative purposes, this report adheres to the organization and content of the 1995 report as much as possible, with some modification to ease presentation of the considerable new available data. The report replicates the case study examination of the psychology workforce in the 1995 report, with an analysis of the current social context and patterns of education, employment, and professional activities of psychologists. Chapter 1 presents introductory material and a brief overview of the methods and data sources. Chapter 2 places the discipline of psychology in the larger sociocultural, legal, and economic context, presenting data regarding the overall status of the profession. Chapter 3 presents data on education and training. Chapter 4 presents data on employment issues: employment status, settings and job-related activities, salaries, and patterns in particular settings such as academic positions and health service provision settings.¹ Chapter 5 presents data on professional activities of psychologists in APA. Chapter 6 makes conclusions and recommendations for action to build a robust, equitable, and inclusionary psychology workforce.

Method and Data Sources

This update and expansion of the 1995 report was based on data provided primarily by CWS (supplemental data from other bodies within and outside of APA and from the research literature are noted as such). Ruth Fassinger, PhD, served as an APA Visiting Scholar and a consultant to the CWP, and she compiled data and wrote the first draft of the report. The project was directed by the CWP, including an Advisory Committee that provided input and feedback at key points. Original data points in the 1995 report were replicated or approximated when possible, and formal statistical analyses were conducted (e.g., differences tested for significance) where reasonable; when done, they are noted in the text, and the data are summarized, with additional detail provided in the appendices. Older data sources were reanalyzed to replicate previous results. CWS identified newer data sources, such as ones that did not exist in 1995 or better alternatives.

Federal, state, local, professional society, and voluntary web-based membership databases exist as well as samples of various kinds and sizes in formal research studies of psychologists and of women workers. Each database varies in definitions, inclusionary criteria, coding, sampling and analysis methods, and interpretation.

¹ Health services psychology includes integration of evidence and practice, cultural and diversity awareness, and practice areas such as clinical, counseling, or school psychology (APA, 2015b).

Thus, it is difficult to draw incontrovertible conclusions about all data points. Nevertheless, each data source offers a useful perspective, and the main sources used in this report are summarized below. APA sources are listed first.

- **APA Division Profiles:** Since 2005, CWS has produced tables of member statistics for each APA division. The tables cover demographics, educational characteristics, current major professions, and member characteristics. In 2013, approximately 40% of all APA Associates, Members, and Fellows belonged to at least one division. The obvious constraint is that this is a self-selected group of psychologists and that inferences to the general psychology population are limited.
- **APA Governance Survey:** The Governance Survey began in 1999 as a collaboration between the Center for Workforce Studies (then the APA Research Office) and the Women's Programs Office and was originally named "Governance Survey: Representation of Women, Ethnic Minorities, Gay Men, Lesbians and Bisexuals, and Individuals With Disabilities on APA Boards and Committees." The 2012 APA Governance Survey is the seventh wave of data collection of APA Governance members currently serving on the Council of Representatives, Boards, and Committees. A total of 322 out of 526 Governance members completed the survey, yielding an overall response rate of 61%; note that the response rate might be lower for White men because of the perception that such a survey does not apply to them.
- **APA Member Profiles:** Each year, CWS compiles a set of tables that profiles the demographic, educational, and employment characteristics of APA members by member status. In 2013, profiles were compiled for the 87,885 APA Associates, Members, and Fellows.
- **APA Practitioner Surveys (2008, 2011, 2013):** The APA Practice Organization/Directorate conducted surveys of practitioners who were members of the association, with return rates of about 14% and samples of more than 2,500 practitioners for each year noted. More than half of these respondents were women (62% in 2013 and more than three quarters of early career psychologists); about 8% of respondents were racial/ethnic minorities.
- **APA Salary Survey:** The Salaries in Psychology Survey was conducted 15 times between 1981 and 2009, and it was disseminated to APA members who were working full-time in a variety of positions. Salary data were presented by employment position, employment setting, median years since doctorate, gender, race/ethnicity, and geographic region. In 2009, 11,656 members took part in the survey, yielding a response rate of 27%.
- **APA Commission on Accreditation Annual Reports; Five-Year Summary Report (2011):** The Commission on Accreditation (CoA) produces yearly annual reports summarizing information from all programs that are accredited by APA (i.e., training programs for graduate psychologists entering clinical/counseling practice, as well as internship and postdoctoral program sites that provide practice placements). In 2011, the CoA produced a 5-year summary of data for the years 2006–2010 (the data included in this report). The CoA reports include information about students and faculty in clinical PhD and PsyD programs as well as counseling, school, and combined psychology programs, thus providing a picture of psychologists who are practitioners.
- **APA Doctorate Employment Survey (1997, 1999, 2001, 2003, 2005, 2007, 2009):** The Doctorate Employment Survey was conducted by CWS on a biennial schedule, with the last iteration of this survey disseminated in 2009. Newly awarded recipients of psychology doctorates were asked questions regarding their experiences entering the psychology workforce and the relevance of their graduate training to their work situation.

- **APA Faculty Salaries in Graduate Departments of Psychology Survey:** This survey, conducted on an annual basis by CWS, collects demographic and salary data for faculty in U.S. and Canadian departments that award master's and doctoral degrees in psychology (note: tables and figures in this report reflect only U.S. departments of psychology, educational psychology, and professional schools of psychology).
- **APA Graduate Study in Psychology Survey:** This survey is conducted on an annual basis by APA's Education Directorate, and it collects information on demographic characteristics of faculty and first-year psychology graduate students as well as application, acceptance, and enrollment characteristics of U.S. graduate departments of psychology. It also includes admission and graduation requirements, tuition information, and support information available to U.S. graduate students in psychology.
- **APA Health Services Provider Survey:** The survey was last conducted in 2008 by the Center for Workforce Studies, and it sampled (a) doctoral-level APA members identified as trained in a clinical, counseling, or school subfield and eligible for licensure and (b) non-APA members holding a professional license in psychology from at least one state licensing board or agency. The 2008 sample included approximately 6,400 respondents, reflecting a response rate of about 15%. Women composed about 58% of the sample, racial/ethnic minorities 13%, lesbian/gay/bisexual individuals 8%, and people with disabilities 5%.
- **American Community Survey (ACS):** The ACS (produced by the U.S. Census Bureau) is sent to 3 million U.S. addresses annually, and it gathers information previously contained only in the long form of the decennial census. The ACS provides estimates of demographic, housing, as well as social and economic characteristics for all states, cities, counties, metropolitan areas, and population groups of 65,000 people or more. The coverage is the entire U.S. population; however, such a high-level view can result in loss of detail and imperfect approximations relevant to the questions of this report.
- **Integrated Postsecondary Education Data System (IPEDS):** IPEDS is part of the U.S. Department of Education's National Center for Education Statistics. IPEDS collects information (e.g., counts of degrees awarded) annually from every institution of higher education that participates in federal student financial aid programs (i.e., most higher education institutions in the United States).
- **National Science Foundation (NSF) Survey of Earned Doctorates and Survey of Doctorate Recipients:** The NSF's Survey of Earned Doctorates is an annual survey that collects information about individuals receiving research doctorates. This report used the Survey of Earned Doctorates to examine the demographic characteristics of the psychology education pipeline and to compare psychology doctorates to other science and engineering fields. The Survey of Doctorate Recipients is a biennial survey that contains information about scientists and engineers with research-based doctoral degrees, including salaries, work activities, and work settings.
- **NSF Scientists and Engineers Statistical Data System (SESTAT):** SESTAT is a system that integrates NSF's data on the science and engineering workforce. The 2010 data in SESTAT provides weighted data on an estimated 26.9 million people in the U.S. scientific workforce.
- **American Time Use Survey:** The Bureau of Labor Statistics sponsors the U.S. Census Bureau to conduct the Current Population Survey. The American Time Use Survey is a component of the Current Population Survey that asks one household member who is older than 15 years of age for a detailed list of his or her activities (e.g., sleeping, eating) on the previous day. These questionnaires are given over a 2- to 5-month period. This report uses American Time Use Survey data from 2003.

Where possible, data are generally reported in the text, with extensive tables and figures included in the appendices, which are available online. Medians and/or means are presented, depending on appropriateness

or availability. Numbers were rounded in many tables and figures; totals may exceed 100%. Benchmark years were selected to chart trends over time. An attempt was made to use dates that approximated the mid-1990s, circa 2000, mid-2000s, late 2000s, and the most current year(s) available. However, practical limitations prohibit strict comparison by years. Many tables and figures conform only loosely to benchmark years.

Language use throughout the document generally conforms to the terminology used in the data sources themselves, and tables or figures directly from other sources were not changed. Information about definitions and labels used are contained in table or figure notes and/or in the text.

Intersectionality is a core value of feminist psychologists, and this report contains data on underrepresented minority groups (e.g., racial/ethnic minorities) to promote understanding of culturally diverse women in the psychology workforce. Most of the data in this report are not directly intersectional; for example, data on racial/ethnic minority women psychologists may not be available due to small numbers in the database samples. However, data are presented where available to show comparisons (whether tested statistically or not) between the larger groups in which diverse women reside, with the expectation that these data be interpreted cautiously and regarded as suggestive of directions for a much more comprehensive data collection effort aimed at understanding intersectional identities.

Overview of the Psychology Workforce: Who Are They?

To make sense of the varied and detailed data in this report, it is necessary to hold a “big picture” of the psychology workforce. Despite the limitations and constraints of existing data sources, there are some general observations that can be made about the overall psychology workforce with some degree of certainty; these observations were generated with the expert staff of the CWS (CWS, personal communication, August 4, 2014) and are presented here to aid the reader in contextualizing the many data points in this report.

There are estimated to be approximately 180,000 psychologists currently in the U.S. workforce; 60%–65% are women, and about 10%–15% are members of racial/ethnic minority groups. Of the 180,000 total psychologists, approximately 106,000 are licensed to practice (most of them concentrated in the Northeast, California, and Texas), and about 40,000–45,000 work in colleges and universities; of the latter, about 40% are women, and 7%–8% are members of racial/ethnic minority groups. Note that licensed practitioners and academics are not completely discrete categories because many psychologists in academic settings also maintain independent therapy and/or consulting practices, and many practitioners are affiliated with academic institutions in pedagogical and supervisory roles.

There are approximately 600 programs or departments of psychology in higher education institutions throughout the United States. They produce annually about 6,000 doctorates, including 1,500–2,000 PsyDs. About half of the earned doctorates are in health service provider subfields, about 74% of doctorates are awarded to women, and about 22% are awarded to members of racial/ethnic minority groups.

Approximately 44% (79,000) of all psychologists belong to APA, and about 5.5% (26,000) belong to the Association for Psychological Science (composed mostly of psychologists who identify as scientists); some belong to both professional organizations. Of the approximately 79,000 psychologists who belong to APA, more than 65% are women (about 52,000), 15% are members of racial/ethnic minority groups, 5%–10% identify as lesbian/gay/bisexual/transgender, and 1%–2% report having disabilities (although individuals can belong to more than one category). Approximately 40% of licensed psychologists belong to APA, and of these, about 4% are certified further by the American Board of Professional Psychology (ABPP). Approximately 550 APA members are involved actively in APA governance activities.

Summary

This report updates and expands the 1995 *Report of the Task Force on the Changing Gender Composition of Psychology*. Data were provided primarily by the APA Center for Workforce Studies, and data sources were listed and described in this opening chapter. A very broad overview of psychologists in the workforce was provided to contextualize the data described throughout the report.

Women represent the source of greatest growth for graduate education in psychology. As predicted in the 1995 report, most (up to 80%) health service provider–related programs are composed of women students, a demographic trend that is highly likely to continue. Although the growth of the field of psychology has been energized primarily by women, especially racial/ethnic minority women, academic programs and training requirements have not shifted to match the sociocultural needs of this changing demographic.

2 PSYCHOLOGY IN SOCIOCULTURAL CONTEXT

Sociopolitical Changes

The 1995 American Psychological Association (APA) report reviewed the “herstory” of women in psychology, pointing to long-standing patterns of discrimination, occupational segregation, educational exclusion, barriers to advancement and recognition, and the subsequent rise of attention to women’s status within APA. The 1995 report also documented landmark legislative and sociopolitical changes occurring in the 1960s and 1970s that had affected women in the workforce, including psychology. These included antidiscrimination and basic workplace civil rights, pay equity, educational access, and pregnancy protections, all of which afforded women some measure of protection from discrimination and access to education and work and, thus, supported the fairly dramatic increases by women in workforce participation (including psychology) observed in the 1995 report.

From the 1980s on, additional changes have occurred that have generally supported women (and other traditionally underrepresented minorities) in education and work. Many of the changes are elaborations or regulating mandates of earlier legislation, whereas some changes involve new laws (for more information, see the U.S. Department of Labor [<http://www.dol.gov>] and U.S. Equal Employment Opportunity Commission [<http://www.eeoc.gov>] websites) or Supreme Court rulings. Some particularly important legal and policy changes relevant to diverse women include the following:

- **Section 1604.11 of the Guidelines on Discrimination Because of Sex, 29 C.F.R. § 1604.11 (1980)**, issued by the U.S. Equal Employment Opportunity Commission (EEOC), declared sexual harassment a violation of Section 703 of Title VII of the Civil Rights Act of 1964, established criteria for determining when unwelcome conduct of a sexual nature constitutes sexual harassment, defined circumstances under which an employer may be held liable, and suggested affirmative steps an employer should take to prevent sexual harassment. The EEOC and lower courts have applied these guidelines in enforcement litigation, and there is currently an effort to enact federal legislation against workplace bullying in the form of the Healthy Workplace Bill.

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- **The Americans With Disabilities Act of 1990 (ADA)** prohibits discrimination against people with disabilities in employment, transportation, public accommodation, communications, and government activities. In 2008, the ADA Amendments Act mandated a broadened definition of disability, making it easier for women to claim coverage for pregnancy-related and caregiving responsibilities.
- **The Family and Medical Leave Act of 1993** entitles eligible employees of covered employers to take unpaid, job-protected, health-insurance-protected leave for specified family and medical reasons (e.g., pregnancy-related or caregiving). Recent additional rulings have extended military family provisions (2013) and provisions to spouses in legal same-sex marriages (2015), and there are efforts underway at the federal level for mandating *paid* sick leave and parental leave.
- **The Notification and Federal Employee Antidiscrimination and Retaliation Act of 2002** imposes additional duties on federal agency employers to ensure a work environment free of discrimination and retaliation. It includes mandates about regular notification and training regarding employment discrimination and whistleblower protections, annual reports filed with the EEOC, statistics about complaints posted on public websites, and reimbursement for payments made in response to violations.
- **The Patient Protection and Affordable Care Act of 2010** was designed to increase the affordability of health insurance and expand insurance coverage by offering subsidies and creating insurance exchanges. It requires insurance companies to have minimum standards for coverage and to offer the same rates regardless of preexisting conditions or sex. Furthermore, it amended the Fair Labor Standards Act to require employers to provide a nursing mother reasonable break time to express breast milk after the birth of her child.
- **The Supreme Court *Obergefell v. Hodges* Decision on Marriage Equality (2015)** ruled by a 5-to-4 vote that the Constitution guarantees a right to same-sex marriage, making marriage equality official after decades of litigation and activism.
- There has been a recent increase in anti-LGBT (lesbian, gay, bisexual, and transgender) legislation, including conscience clause and religious freedom bills in response to the 2015 Supreme Court *Obergefell v. Hodges* decision legalizing same-sex marriage, and anti-transgender legislation such as North Carolina's HB-2 "Bathroom Bill" that prevents transgender and gender nonconforming individuals from accessing bathrooms congruent with their gender identities.
- As the 50th anniversary of the **Voting Rights Act** approaches, there are increasing concerns that new voting laws threaten to disenfranchise women and racial and ethnic minorities from the right to vote. For example, Texas's new voter identification laws require all voters to provide acceptable photo identification that reflects their current name, which disproportionately affects women (because women are more likely to change their name after marriage or divorce or may use one name professionally and another in personal life), older adults, people with disabilities, and those who are ethnic and racial minorities, all of whom are less likely to have photo identification (Smith, 2013).

These protective laws help benefit the well-being of women by protecting them against workforce sexual, cultural (i.e., military and same-sex partners), and able-bodied discrimination, whereas challenges to voting rights threaten to undermine decades of progress. Anti-same-sex-marriage laws and laws that do not support gender-neutral bathroom access perpetuate acts of oppression and discrimination for transgender and gender nonconforming individuals. Other legislation important to diverse women includes the Immigration Reform and Control Act of 1986, which prohibits employment discrimination based on national origin or citizenship, and the pending Employment Non-Discrimination Act, which would provide protection from discrimination of sexual

minority workers at the federal level. APA has supported nondiscrimination legislative efforts in a multitude of ways, including formal resolutions, government lobbying, and filing of *amicus* briefs in relevant court cases.

In addition to legislative changes, several other critical trends have occurred since 1995 that contribute to the sociopolitical context of the composition of psychology:

- The United States has been involved in multiple **wars in Iraq and Afghanistan** since 2001, continuing through today. In addition to the significant financial impact, the emotional impact of continued violence on the psyche of a nation for such a duration as well as the substantial increase in posttraumatic stress disorder among returning service members and their families remains to be fully realized.
- The 1995 *Report of the Task Force on the Changing Gender Composition of Psychology* identified **managed care** as a challenge to practicing psychologists. In 1998, more than 80% of private practice psychologists viewed managed care policies as negatively affecting their practice (Phelps, Eisman, & Kohout, 1998). More recently, there is substantial support for continuing challenges to psychological practice. The managed care focus on reimbursing only for “medically necessary” problems comes at the expense of ecologically, politically, and developmentally based difficulties, and it creates “practical, ethical, and financial dilemmas for practitioners when these insurance mandates conflict with evidence-based practices and ethical requirements to ensure treatment is responsive to the patient’s specific problems, strengths, personality, sociocultural context, and preferences” (APA Presidential Task Force on Evidence-Based Practice, 2006, p. 278). For example, psychologists who provide psychological assessment, a hallmark of psychological practice, often struggle to provide optimal standards of evaluation with restricted or denied reimbursement (Turchik, Karpenko, Hammers, & McNamara, 2007). Psychologists who accept insurance are significantly more likely to work more hours, provide more therapy services, and receive less supervision (Rupert & Baird, 2004).
- Substantial numbers of adults in the United States present with **unmet needs for mental health treatment** (Stockdale, Klap, Belin, Zhang, & Wells, 2006), despite a 20% increase from 2001 to 2010 in Americans’ use of psychiatric medication (Medco, 2011). Use of stimulants for treatment of attention deficit hyperactivity disorder has increased substantially, particularly for women and girls. Although the movement to grant psychologists the right to prescribe psychiatric medication began in the late 1960s, by 2015 only three states (New Mexico, Louisiana, and Illinois) have passed legislation giving prescribing rights to psychologists as of 2015. APA stated that prescribing rights for psychologists is a substantial step to both increase access (e.g., to rural areas underserved by psychiatrists) and ensure quality treatment (APA Practice Organization, 2017).
- After the election in 2008 of President Barack Obama, there have been substantial increases in **racial tension related to police violence against people of color**. Recent incidents and the Black Lives Matter movement are now bringing increasing national attention to the fact that police brutality is also becoming an issue for women of color (Dandy, 2015). Various community groups—including the Young Women’s Christian Association (YWCA), Sister Circle Collective, and AF3IRM (a transnational feminist organization)—have long been actively involved in the social justice battle to address issues of inequity and oppression of women. However, there is much work to be done, and psychologists can have a major impact in helping to address these social justice issues.
- **Increased awareness about gender inequity in the workplace and initiatives to level the profession for women** are continuing, including work-based child care, more generous employer family leave policies, and flexible work schedules. In academia, initiatives include policies, testimony, and strategies for stopping the tenure clock for faculty after childbirth or adoption; increasing mentoring and career development;

increasing the representation of women and men of color; and fixing the leaky training “pipeline” that leads to many people dropping out of science, technology, engineering, or mathematics (STEM) fields after undergraduate education or before achieving tenure. Professional associations (e.g., American Association of University Professors, 2001/2014; National Postdoctoral Association, 2012) have picked up the call and have continued the conversation about sociocultural aspects of society that sustain inequity and how women can make choices to embrace leadership.

Expansion and Concentration of the Discipline

The 1995 report used a case study approach based on a queuing model (Reskin & Roos, 1990; Roos & Jones, 1993), in which disproportionate gender distributions are assumed to arise from structural changes in labor market queues (e.g., due to occupational growth or decline, regulatory demands, educational opportunity) that result in more women in the labor queue for a particular occupational sector. For example, occupational growth or decline assumes that hiring of women is linked to shortages of men, due either to excess positions available (growth) or men avoiding positions no longer viewed as attractive (decline). For this reason, the 1995 report queried the robustness of psychology as a discipline, finding indications of growth, prestige, and attractiveness of the discipline in that time period.

The report noted in particular the marked growth in the practice arena, citing important social changes that had led to increased demand for mental health services (e.g., de-institutionalization of mental health patients) and decreased restrictions on practice (e.g., legislation promoting the autonomous practice of psychologists). The report also observed that the prestige of the discipline was high and that the attractiveness of the profession was supported by substantial numbers of people entering the profession and few leaving it; however, the report also noted warning signs that changes such as the advent of managed care and declining numbers of academic jobs perhaps rendered the discipline less attractive to men. Noting that increases in numbers of women entering psychology were even more dramatic than in other fields at the time, the report concluded that decreasing percentages of men in psychology resulted both from lower entry rates of men and from the influx of women entering the field throughout the late 1970s and the 1980s.

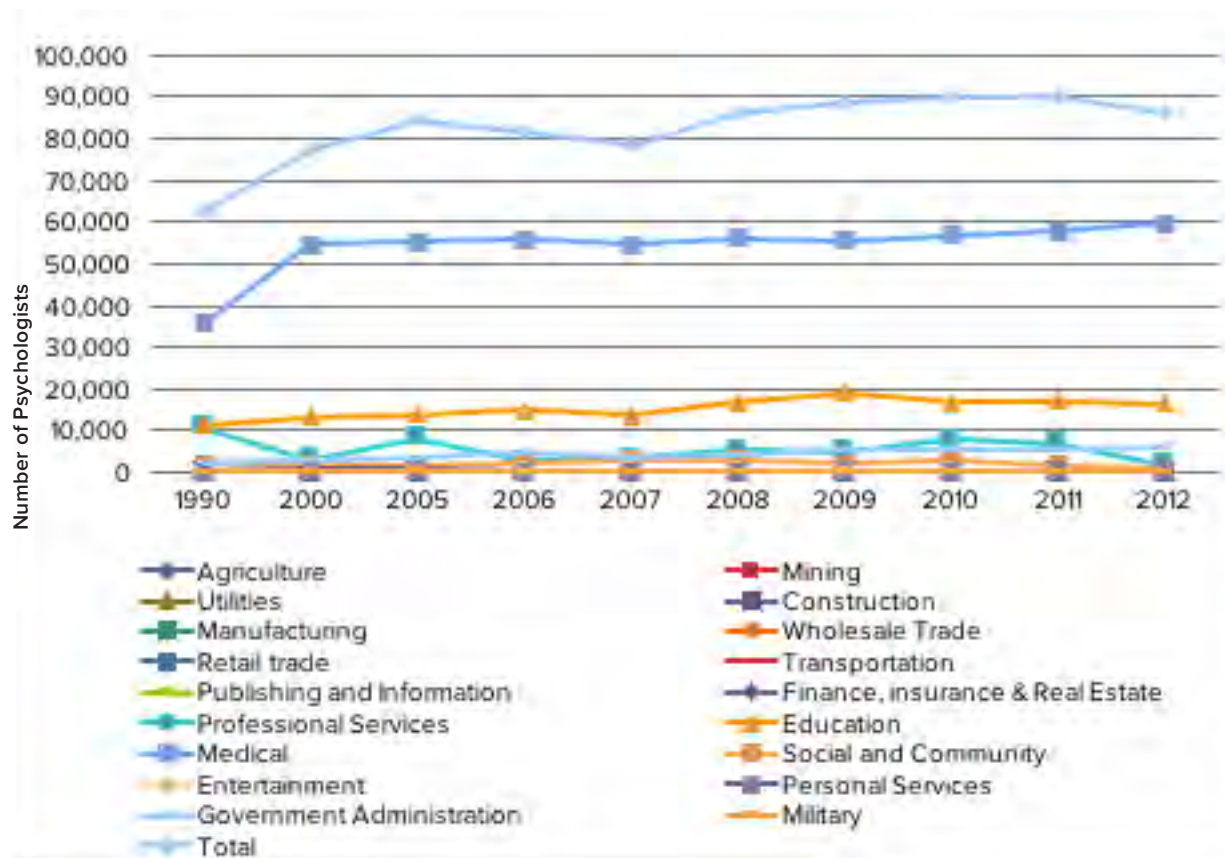
In this update, the available data suggest that the discipline of psychology has continued to exhibit considerable growth and change, including steady and dramatic expansion in the health arena as first noted in the 1995 report. **Figure 2.1** is based on American Community Survey (ACS) data (cf. U.S. Census) in which psychologists with doctoral and professional degrees were coded into various broad industry categories in which they reported working. These data provide an overall picture of where growth is occurring in the field and, thus, some direction about areas to examine more closely in understanding women’s patterns of psychology workforce participation.

Figure 2.1 shows that the overall number of doctoral-level psychologists (as captured by the ACS; U.S. Census Bureau, n.d.) has grown substantially between 1990 and 2012 (from 62,709 in 1990 to 86,358 in 2012; see Appendix A). The largest employers of psychologists are in medical and education fields. The figure also shows that most industry groups have remained fairly stable since 1990, with the exception of the health services industry, which has grown considerably and continues to climb. Also growing is government administration (often overlooked due to its small overall numbers), which has tripled (from 2,018 in 1990 to 6,332 in 2012; see Appendix A).

A market share view of these data (see Appendix A) indicates areas that may be likely to grow (or decline) in the future based on 20-year trends. This analysis suggests that growth in health care should be examined closely in trying to understand where women might be located in the future psychology workforce.

FIGURE 2.1

Number of Psychology Doctorate and Professional Degrees by Census Industry Groups



Source. American Community Survey data for the years 1990, 2000, 2005–2012 (U.S. Census Bureau, n.d.).

Growth in Work Settings and Activities

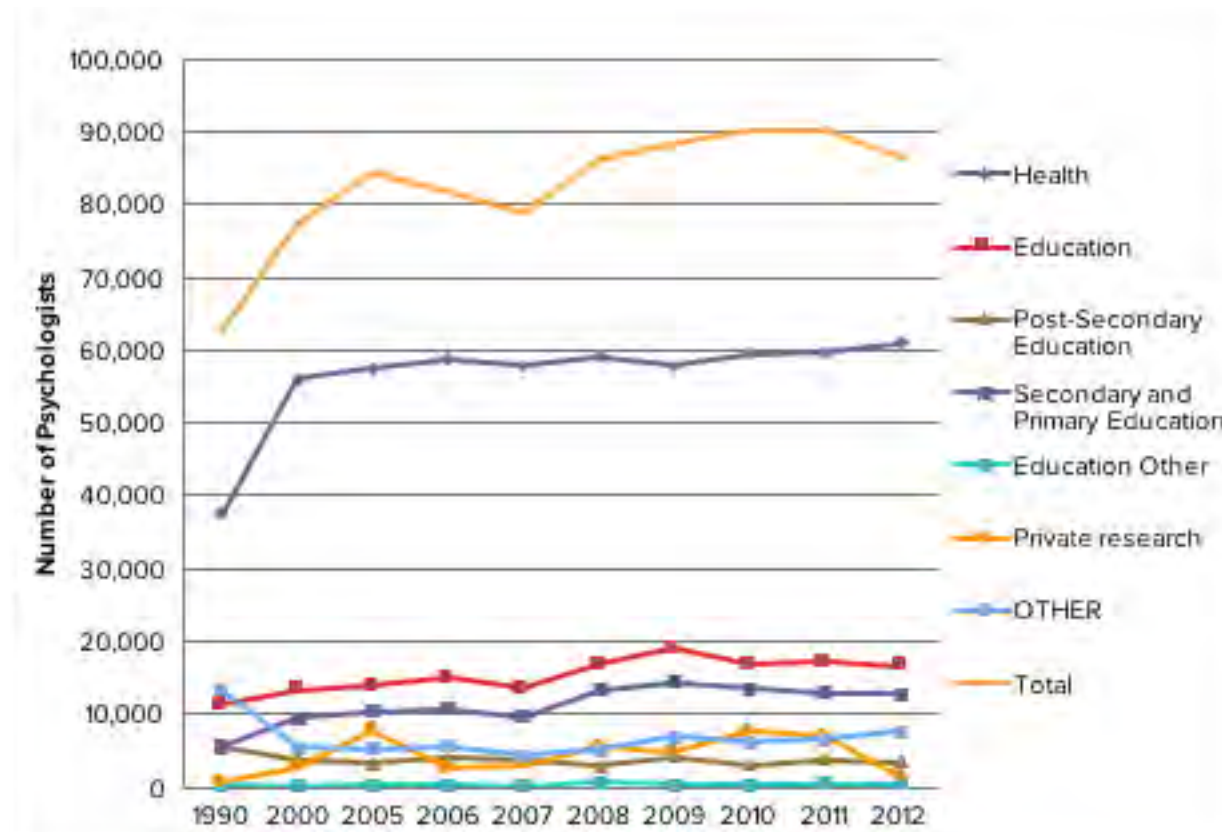
As is evident in Figure 2.1, psychologists can be found throughout many of the major industry groups in the U.S. economy. However, a closer look at the most relevant subindustries or sectors created by the APA Center for Workforce Studies (CWS) from the ACS coded industry data shows even more clearly where psychologists are most often employed. **Figure 2.2** shows the growth patterns in the subindustries or sectors since 1990. As can be seen in the figure, the largest rise in employment has been in the (medical) health services sector, which continues to climb (from an estimated 37,480 psychologists employed in 1990 to 60,879 in 2012; see Appendix A). Education shows relatively stable growth overall, but there has been a decline in employment in postsecondary education, offset by more than doubled employment of psychologists in primary and secondary education (e.g., psychologists in secondary education increased from 5,576 in 1990 to 12,755 in 2012; see Appendix A).

A market share analysis (see Appendix A) indicates increases in health services (from 57% in 1990 to almost 70% of the market share by 2012), suggesting the importance of understanding how this change compares to gender distribution in the current psychology workforce. The market share patterns show a decreased share in postsecondary education and a slight increase in primary and secondary education. The changes in the education sector are worth exploring in relation to the employment of women psychologists currently, as the “herstory” of women’s participation in psychology (documented in the 1995 report) indicates clearly the over-

representation of women relative to men in educational settings since the early days of the field. It is important to recognize the overrepresentation of women in educational settings relative to men is not necessarily bad. There seems to be an ongoing pattern of violence, bullying, and sexual harassment in schools; thus, there is an increasing need for more psychologists working in primary and secondary education.

FIGURE 2.2

Number of Psychology Doctorate and Professional Counts by Industry Sector



Source. Analysis by APA Center for Workforce Studies (cf. American Community Survey data; U.S. Census Bureau, n.d.).

Robustness of Science and Practice in Psychology

Psychology as a field rests on a foundation of both science and practice, so the overall robustness of the field must be judged by psychologists' participation in both arenas. This section briefly explores indications of strength in science and practice.

One indication of the strength of scientific psychology is the numbers and kinds of journals it supports. Psychologists publish in APA-sponsored journals, in APA division journals published outside of APA, in journals of other professional associations, and in journals owned by academic publishers. As but one indication of scientific growth, APA-sponsored journals have grown substantially, particularly in the divisions. The number of APA-wide journals grew from 50 in 1995 to 64 in 2013, with an increase in total pages from about 20,000 in

1995 to 30,000 in 2013. The number of APA division journals published by APA increased from 23 to 35 (APA Office of Publications and Databases, personal communication, July 28, 2014; see Appendix A). Information about women's participation in scientific leadership in publishing is presented in Chapter 4 of this report.

Because scientists increasingly rely on external funding to support their research, another measure of the scientific strength of psychology is in the amount of grant funding psychologists receive. Although psychology lags behind other science fields in federal funding, there has been some growth since 1995. Total federal obligations to psychological research climbed from a little more than \$620 million in 1995 to about \$2 billion in 2012, most of it in the biopsychology and neuropsychology research arenas (National Science Foundation, Division of Science Resources Statistics, 2004; National Science Foundation, National Center for Science and Engineering Statistics, 2013; see Appendix A). The general trend of growth appears to be slowing; in 2013, the National Institutes of Health (NIH) cut 5% (\$1.55 billion) of its fiscal year 2013 budget, substantially reducing funding for research and affecting morale (U.S. Department of Health and Human Services, 2013). Thus, for research psychologists, as for many other scientists, there is an ongoing struggle to obtain funding to support their important programs of research.

In terms of the robustness of the practice arena, of the more than 500,000 self-identified behavioral health providers nationally, approximately 16% of them are psychologists (Hamp, Stamm, Christidis, & Nigrinis, 2014). Psychologists licensed to provide mental health services in their states represent more than half (approximately 106,000) of all psychologists. There are about 34 licensed psychologists for every 100,000 people in the United States, although psychologists' geographic and urban concentrations leave many areas of the country severely underresourced for mental health needs, especially in rural areas, which must be considered in planning for future psychology workforce growth. Additional data regarding psychologists who are health service providers or preparing for health service provider roles are presented in Chapters 3 and 4 of this report.

APA as a professional organization represents the interests of psychologists engaged in both science and practice, and the robustness of the organization can be ascertained by its growth and stability in general membership. Although the membership of the organization is aging, overall membership has remained fairly stable over time, ranging from 79,098 members in 1995, to a peak of 92,322 in 2008, and a recent decline to 82,153 in 2013, which are the most recent numbers available (APA, 2015a). Current membership is about 60% women and about 15% members of racial/ethnic minority groups. The association has seen the addition of 14 specialties (e.g., clinical neuropsychology) and six proficiencies (e.g., psychopharmacology) since the mid-1990s. Detailed discussion of APA membership is presented in Chapter 5 of this report.

Summary

The 1995 report noted that psychologists had moved beyond the traditional work settings of clinical practice and academe, and it documented societal and professional changes that were thought to be influencing the psychology workforce, both at that time and projected into the future. The 1995 report noted current sociocultural issues at the time of the increased recognition of psychology in the media, a tightening of both positions and autonomy in academe, variability in research funding, increasing demand for outpatient mental health services, fluctuation in restrictions on the autonomous practice of psychology, and growth in opportunities for applied work (e.g., in applied research, organizational management, government). The 1995 report predicted that the psychology workforce likely would continue to see the dominance of health service provision, that academe might become decreasingly possible or attractive as a job option, and that psychologists probably would continue to expand into new employment sectors and settings.

In 2015, it was evident that the psychology workforce continues to exhibit many of the patterns noted and confronts many of the issues predicted in 1995. Sociocultural issues current to 2015 include expansion of legislation in several key areas to include some protections for sexual discrimination, women with disabilities, family and medical leave, whistleblower protections, and marriage equality as well as expanded health insurance and break time for nursing mothers. There have also been substantial challenges, including attacks on voting rights and increase in police violence against people of color.

Psychology is a discipline that continues to grow and attract new professionals, and expansion is particularly evident in the health services sector, which clearly dominates the workforce, as predicted in 1995. Data indicate that psychologists are, indeed, entering diverse employment sectors and settings (documented anecdotally in 1995) and that sectors or areas of notable growth include primary and secondary education and government administration. Finally, the discipline exhibits robustness in both science and practice, with growth in research funding and output and large numbers of licensed practitioners in the workforce throughout the United States despite reduction in the number of APA members over time.

APPENDIX A contains additional details for Chapter 2 (see <http://www.apa.org/women/programs/gender-composition/index.aspx>).

In 2015, it was evident that the psychology workforce continues to exhibit many of the patterns noted and confronts many of the issues predicted in 1995.

3 EDUCATION AND TRAINING OF PSYCHOLOGISTS

Because extensive education and training are necessary to workforce entry as a psychologist, what occurs in the educational process is critically important to understanding gender patterns in employment. The 1995 report documented the shifts from the predominance of men in psychology at all levels of education to the overtaking of the educational pipeline by women, a shift that mirrored larger societal trends of the time. Moreover, the explosion of growth in health service provider subfields was accounted for mainly by women (who composed 64% of new doctorate recipients in clinical, counseling, and school psychology in 1991).

This report focuses on graduate education, for which there are many more data sources. The role of the pipeline is identified in the recommendations section for further pursuit. The Committee on Women in Psychology (CWP) was not able to fully pursue the 1995 report's suggested follow-up on investigating the pipeline of training for psychologists, including identifying changes in the gender composition of associate's and bachelor's psychology majors who attend community colleges and 4-year institutions, including how cost and flexibility relate and who is unable to complete associate's and bachelor's degrees and why.

The CWP agrees that pipeline issues are of fundamental importance, particularly as these relate to the entrance of women and marginalized groups into science-related careers. These issues encompass dynamic systems that operate on multiple levels as well as longitudinal factors, all of which may affect choice of major and graduation rates. Such factors undoubtedly include ambivalent sexism, implicit bias, sexual harassment, microaggressions, and a chilly climate that may inordinately disadvantage some while extending privilege to others. Financial costs represent yet another set of factors that form part of the pipeline infrastructure. In themselves, these issues warrant detailed analyses of a multimethod nature and exceed the practical limits of this report. Nonetheless, we note that the most recently available data from the National Center for Education Statistics indicate that at 6%, psychology has remained one of the top 10 undergraduate majors, the highest (20%) being business (U.S. Department of Education, National Center for Education Statistics, 2012a). Given their importance, it is surprising that fields most associated with the global position of the United States, now and in the future, have remained in single digits: computer science (3%), engineering (5%), and mathematics (1%). This trend has occurred despite high employment rates and earnings among degree holders. The role of the pipeline is identified in the recommendations section for further research. These issues are substantial and complex but cannot be covered in their intricacy by this report.

In this chapter, current data are presented regarding graduate education, including student demographics, program characteristics, degree production, education costs and student debt, perceptions of the job market, and first positions obtained by new graduates. In addition, information is presented about education and training in programs specifically preparing students for health service provider roles because the data indicate that this is the main area of growth in psychology currently.

The growth (or decline) of specialties—for example, child or gerontology—as well as expectations and guidelines regarding cultural competence surely will develop and change in the coming decade. In addition, the professional standing of psychology will undergo change associated with health care delivery under the Patient Protection and Affordable Care Act of 2010 and various state-managed aspects of access to care.

Demographics of Graduate Education

Table 3.1 summarizes the numbers of student applicants, enrolled students, and degrees awarded in the approximately 600 graduate departments of psychology in the United States for the benchmark years of 2014 and 2000 (data are from APA's Graduate Study in Psychology Survey and include both master's and doctoral students). **Figure 3.1** is a graphic representation of the applicant and enrollment data. As the table and figure show clearly, applications to and enrollments in graduate programs in psychology have increased substantially, particularly in health service provider subfields. Degrees awarded also have increased somewhat, with most of that increase occurring in the health service provider areas (see Appendix B for additional data).

TABLE 3.1

Numbers of Student Applicants, Enrollees, Degrees Awarded, and Time to Degree in Graduate Psychology Departments, 2014 and 2000

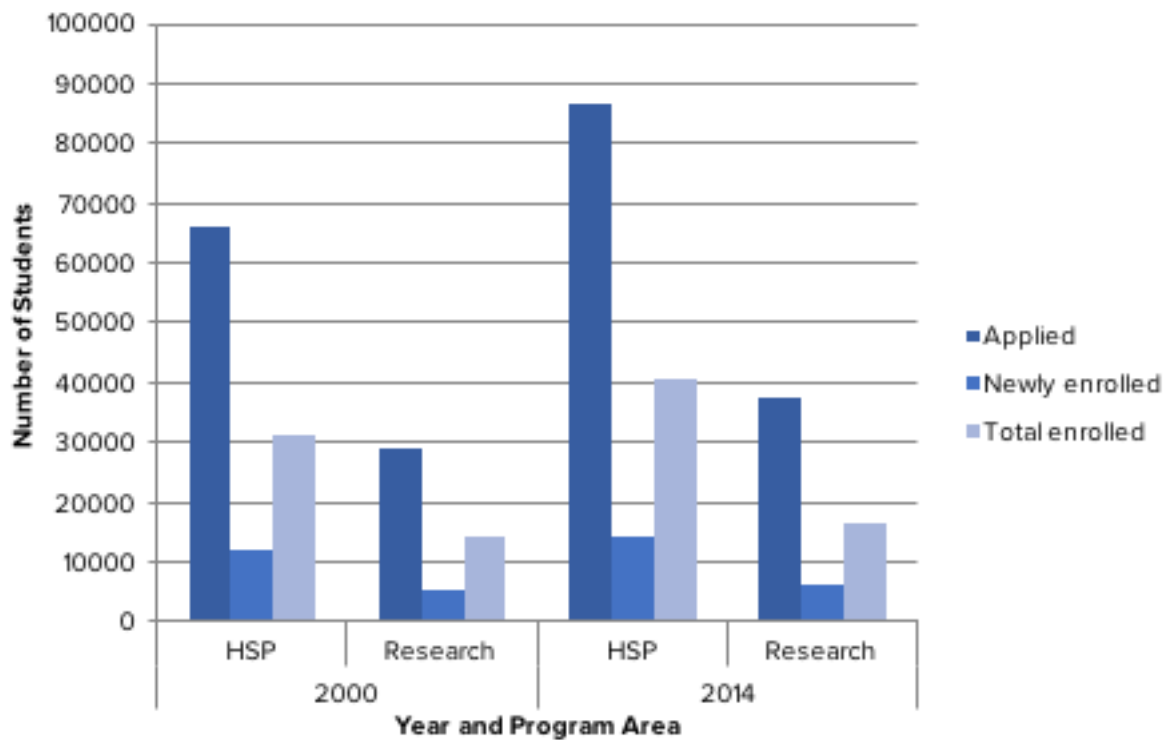
Subfield	Applied		Newly enrolled		Total enrolled		Degrees awarded		Years to program completion	
	2014	2000	2014	2000	2014	2000	2014	2000	2014	2000
Health service provider subfields	86,423	66,275	14,094	12,041	40,755	31,017	11,375	10,251	3.98	—
Research and other subfields	37,525	28,925	6,205	5,252	16,504	14,069	4,442	4,262	4.12	—
Total	123,948	95,354	20,299	17,327	57,259	45,147	15,817	14,535	4.05	—

Note. Data include both master's and doctoral students. A dash indicates that data are not available for this year.

Source. Graduate Study in Psychology Survey (APA, n.d.-a).

FIGURE 3.1

Student Applicants and Enrolled Students by Program Areas



Note. The 2000 edition of the APA Graduate Study in Psychology Survey was the earliest year for which these data could be compiled. HSP = health service provider.

Source. Graduate Study in Psychology, selected years (APA, n.d.-a). Compiled by the APA Center for Workforce Studies.

The gender and race of students enrolled in graduate psychology for two comparison years (2004 and 2014) are presented in **Table 3.2** (again from APA's Graduate Study in Psychology Survey; includes master's and doctoral students). As the table shows, the numbers of students have increased in all gender and racial/ethnic categories, particularly the number of women students (see Appendix B for additional data).

TABLE 3.2

Demographic Characteristics of Students Enrolled in Graduate Departments of Psychology: 2004 and 2014

Characteristic	2004		2014		% change, 2004–2014
	Students	Depart- ments	Students	Depart- ments	Students
Total students	57,662	571	70,311	597	22
Total female students	41,712	566	52,967	595	27
Total male students	14,815	567	17,344	594	17
Black/African American students	3,768	557	5,221	589	39
Hispanic/Latino(a) students	3,211	556	5,330	590	66
Asian/Pacific Islander students	2,714	550	4,593	589	69
Native American students	447	551	501	586	12
White students	N/A	N/A	44,485	589	N/A
Multiethnic students	426	286	1,429	586	235
Students with disabilities	433	342	717	590	66

Note. Surveys between 2004 and 2010 did not collect these demographic counts of students (N/A).

Source. Graduate Study in Psychology, selected years (APA, n.d.-a). Compiled by APA Center for Workforce Studies.

Because data documenting intersectionality in identities is of importance in psychology, an additional table, **Table 3.3**, is provided to show the gender-by-race/ethnicity demographic breakdown in student enrollees for the two comparison years of 2006 and 2012. These data, from APA's Commission on Accreditation, include only students entering accredited clinical, counseling, or school psychology doctoral programs because these programs are the primary locations that prepare students for health service provider roles. As can be seen in the table, most of the numbers show small increases of racial/ethnic minority students pursuing doctorates among female students, and, although the percentages have remained stable for African American and American Indian/Alaska Native female students, there has been growth in percentages of Hispanic and Asian women students.

TABLE 3.3

Gender and Race/Ethnicity of First-Year U.S. Doctoral Students Accepted Into Clinical (PhD or PsyD), Counseling, and/or School Psychology Programs: 2006 and 2012

2006				2012				Gender	% change, 2006–2012
Race/ethnicity	Gender	<i>n</i>	%	Race/ethnicity	Gender	<i>n</i>	%		
African American	Female	1,478	5.8	African American	Female	1,497	5.8	Female	+1
	Male	325	1.3		Male	312	1.2	Male	-4
American Indian/Alaska Native	Female	123	0.5	American Indian/Alaska Native	Female	131	0.5	Female	+7
	Male	67	0.3		Male	43	0.2	Male	-36
Asian/Pacific Islander	Female	1,436	5.7	Asian	Female	1,571	6.1	Asian/Pacific Islander Female	+13
					Male	380	1.5		
	Male	330	1.3	Native Hawaiian/Other Pacific Islander	Female	48	0.19	Asian/Pacific Islander Male	+19
					Male	14	0.05		
Hispanic/Latino(a)	Female	1,964	7.7	Hispanic/Latino(a)	Female	2,279	8.9	Female	+16
	Male	519	2		Male	570	2.2	Male	+10
White	Female	13,073	51.4	White	Female	13,057	50.9	Female	0
	Male	4,264	16.8		Male	4,028	15.7	Male	-6
Multiethnic	Female	423	1.7	Multiethnic	Female	312	1.2	Female	-26
	Male	94	0.4		Male	71	0.3	Male	-24

Note. Asian/Pacific Islander was not separated into Asian and Native Hawaiian/Other Pacific Islander until the 2011 publication of the Commission on Accreditation's Annual Report.

Source. APA Commission on Accreditation's Annual Report Online (APA, 2007, 2013; see Table II-A-6: Student Gender & Race/Ethnicity—All Programs [APA, 2013, p. 13]; i.e., collapsed across Clinical Doctor of Philosophy [PhD], Clinical Doctor of Psychology [PsyD], Counseling, and School Psychology graduate programs).

Taken together, these data on enrollments illustrate that women, including racial/ethnic minority women, account for larger percentages than men (including racial/ethnic minority men) in the graduate educational pipeline. Given that more than half of undergraduates in U.S. higher education institutions are now women, it is reasonable to expect that the numbers of women in graduate study in psychology will continue to hold firm. Some data suggest that to recruit more male students into the psychology pipeline, this may need to occur at the high school level where high school psychology courses—when considered in relation to psychology degrees awarded at the bachelor's, master's, and doctoral levels—have a higher average percentage of male students (APA, Education Directorate, Office of Precollege and Undergraduate Education, 2012). The percentages of racial/ethnic minority students are not commensurate with their numbers in the overall U.S. population. Given that the presence of racial/ethnic minority students is desired in graduate education in psychology to

meet diverse societal needs, these data suggest a pipeline problem in the education system that needs to be addressed.

Doctoral Degree Attainment in Psychology

This section reviews the rates and trends in doctoral attainment (both Doctor of Philosophy [PhD] and Doctor of Psychology [PsyD] degrees) in psychology. Because degree attainment is tracked by many entities (e.g., Integrated Postsecondary Education Data System [IPEDS], National Science Foundation [NSF], APA), each with its own unique focus, the numbers look slightly different depending on the data source (Appendix B contains a detailed explanation of the differences between two key sources of data, IPEDS and NSF, for readers interested in understanding these seemingly discrepant data more fully). For the purposes of this report, several data presentations are provided to present different perspectives on the available information.

Degrees Awarded to Women in Psychology Versus Other Fields

Table 3.4 presents the percentage of doctoral degrees awarded to women in psychology compared to other science-related fields across three benchmark comparison years; these data are compiled from both NSF and U.S. Department of Education data sets. As can be seen in the table, overall patterns indicate consistent growth in women’s participation—some quite dramatic. In terms of comparisons across fields, analyses (chi-square tests) examined the relationship between gender and major field each year. All tests (except for non-significant comparisons of psychology to anthropology and veterinary medicine in 1993) indicated significant relationships between gender and major field each year. Pharmacy, veterinary medicine, and nursing tended to have more women than psychology, whereas all other fields had fewer women than did psychology.

Because extensive education and training are necessary to workforce entry as a psychologist, what occurs in the educational process is critically important to understanding gender patterns in employment.

TABLE 3.4

Percentage of Doctoral Degrees Awarded to Women in Psychology and Other Major Fields and Professions: 1993, 2002, and 2011

Major field	% of women doctorates		
	1993	2002	2011
Anthropology (doctoral) ^a	62	58	60
Computer sciences (doctoral) ^b	14	23	20
Dentistry (DDS or DMD) ^b	34	39	46
Law (LLB or JD) ^b	43	48	47
Medicine (MD) ^b	38	44	48
Neurosciences (doctoral) ^a	40	41	49
Psychology (doctoral) ^b	62	68	75
Sociology (doctoral) ^a	47	61	61
Veterinary medicine (DVM) ^b	63	72	77
Biological/biomedical sciences (doctoral) ^b	40	44	53
Social sciences and history (doctoral) ^b	36	42	47
Health professions and related programs (doctoral) ^b	41	50	58
Pharmacy (PharmD) ^b	65	66	64
Nursing/nursing science (doctoral) ^a		95	91

Note. DDS = Doctor of Dental Surgery; DMD = Doctor of Dental Medicine; LLB = Legum Baccalaureus; JD = Juris Doctor; MD = Doctor of Medicine; DVM = Doctor of Veterinary Medicine; PharmD = Doctor of Pharmacy.

^aNational Science Foundation (1994, 2003, 2012), Survey of Earned Doctorates, Doctorate Recipients from U.S. Universities (also see Hoffer et al., 2003).

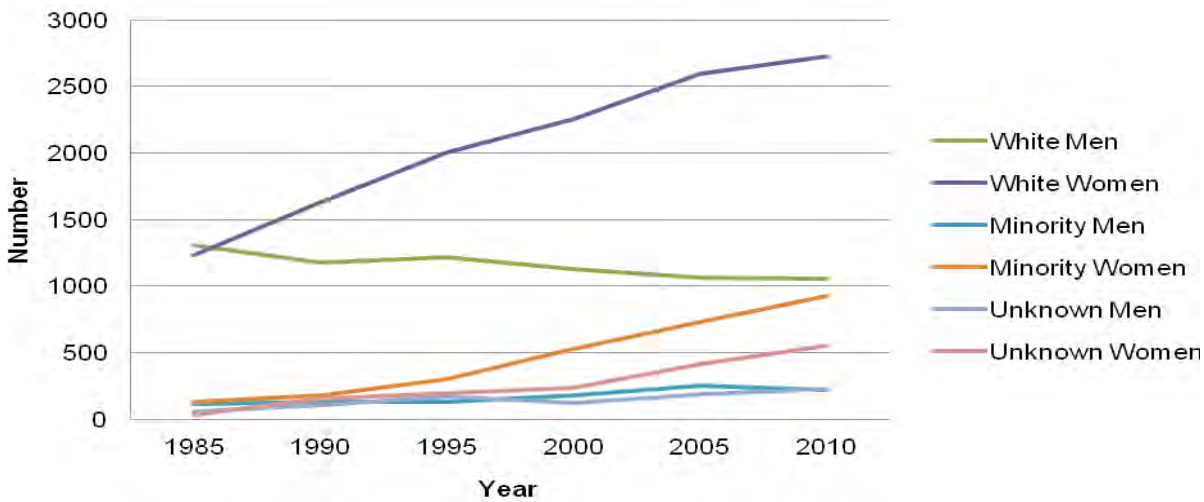
^bU.S. Department of Education, National Center for Education Statistics (1995, 2003, 2012b), Digest of Education Statistics.

Doctoral Attainment by Gender and Race/Ethnicity

Figures 3.2 and 3.3, with their accompanying brief data tables (see **Tables 3.5 and 3.6**), present numbers and percentages, respectively, regarding doctoral attainment of psychologists by gender and race/ethnicity from 1985 to 2010. As can be seen in Figure 3.2, the actual number of psychology doctorates awarded to White, minority, and women of unknown race/ethnicity has increased, whereas the number of psychology doctorates awarded to White men has decreased and the number awarded to minority and unknown men has increased. Analyses (chi-square tests) were done to determine whether there were significant differences related to gender and race/ethnicity in the number of psychology doctorates awarded. Starting around 1995, significantly more psychology doctorates were awarded to White women and minority women than to all men.

FIGURE 3.2

Number of Psychology Doctorates Awarded by Gender and Race/Ethnicity



Source. Integrated Postsecondary Education Data System (IPEDS), Completions surveys (1985–2010; U.S. Department of Education, National Center for Education Statistics, n.d.). Compiled by APA Center for Workforce Studies.

TABLE 3.5

Number of Psychology Doctorates Awarded by Gender and Race/Ethnicity

Year	Total	White men	White women	Minority men	Minority women	Unknown men	Unknown women
1985	2,925	1,308	1,236	113	131	58	35
1990	3,389	1,177	1,634	133	180	110	154
1995	4,027	1,215	2,004	136	304	170	195
2000	4,465	1,131	2,253	181	530	128	242
2005	5,250	1,063	2,599	254	729	187	418
2010	5,719	1,059	2,728	222	927	230	553

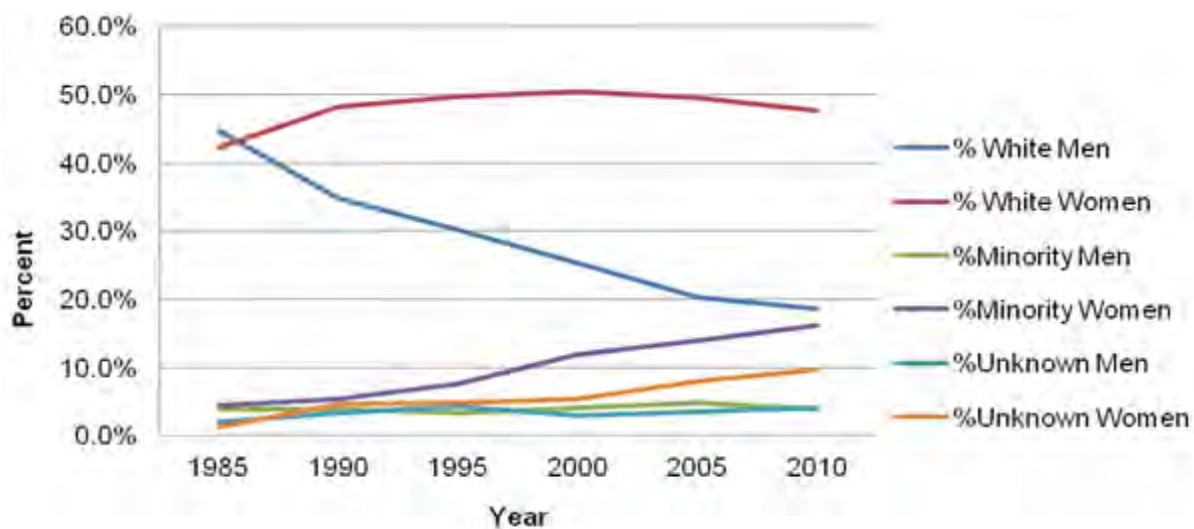
Source. Integrated Postsecondary Education Data System (IPEDS), Completions surveys (1985–2010; U.S. Department of Education, National Center for Education Statistics, n.d.). Compiled by APA Center for Workforce Studies.

Figure 3.3 shows the percentages of total doctorates awarded by gender and race over time. As can be seen in the figure and its accompanying data table, the percentage of psychology doctorates awarded to White women has remained fairly stable (hovering around half) since the original increases several decades ago, whereas the percentage awarded to minority and unknown women increased. The percentage of psychology doctorates awarded to White men decreased dramatically (from about 45% to 19% over the 25-year period), whereas the percentage awarded to minority and unknown men remained relatively stable over this time period.

Taken together, these data suggest that increases in degree attainment are largely accounted for by women, including women from underrepresented racial/ethnic minority groups. Moreover, the decreases in degrees awarded to White men are exhibited in both actual numbers and percentages, the latter of which demonstrate the most obvious decrease. Thus, the enrollments of White men are declining in actual numbers at relatively steady rates, but they are decreasing in their percentage in the field at much higher rates due to the influx of White and racial/ethnic minority women and, to a lesser extent, racial/ethnic minority men. It is not clear why psychology has been attracting much larger numbers of White women, whereas there appears to be constant or declining numbers of other groups.

FIGURE 3.3

Percentage of Psychology Doctorates Awarded by Gender and Race/Ethnicity



Note. Minority includes Hispanic, Black/African American, American Indian/Alaska Native, Asian/Pacific Islander/Native Hawaiian, and two or more races. Unknown includes nonresident aliens and unknown race/ethnicity. Because the methodology in reporting race/ethnicity categories changed over time, caution should be used when interpreting trends through multiple years.

Source. Integrated Postsecondary Education Data System (IPEDS), Completions surveys (1985–2010; U.S. Department of Education, National Center for Education Statistics, n.d.). Compiled by APA Center for Workforce Studies.

TABLE 3.6
Percentage of Psychology Doctorates Awarded by Gender and Race/Ethnicity

Year	% White men	% White women	% minority men	% minority women	% unknown men	% unknown women
1985	44.7	42.3	3.9	4.5	2.0	1.2
1990	34.7	48.2	3.9	5.3	3.2	4.5
1995	30.2	49.8	3.4	7.5	4.2	4.8
2000	25.3	50.5	4.1	11.9	2.9	5.4
2005	20.2	49.5	4.8	13.9	3.6	8.0
2010	18.5	47.7	3.9	16.2	4.0	9.7

Note. Minority includes Hispanic, Black/African American, American Indian/Alaska Native, Asian/Pacific Islander/Native Hawaiian, and two or more races. Unknown includes nonresident aliens and unknown race/ethnicity. Because the methodology in reporting race/ethnicity categories changed over time, caution should be used when interpreting trends through multiple years.

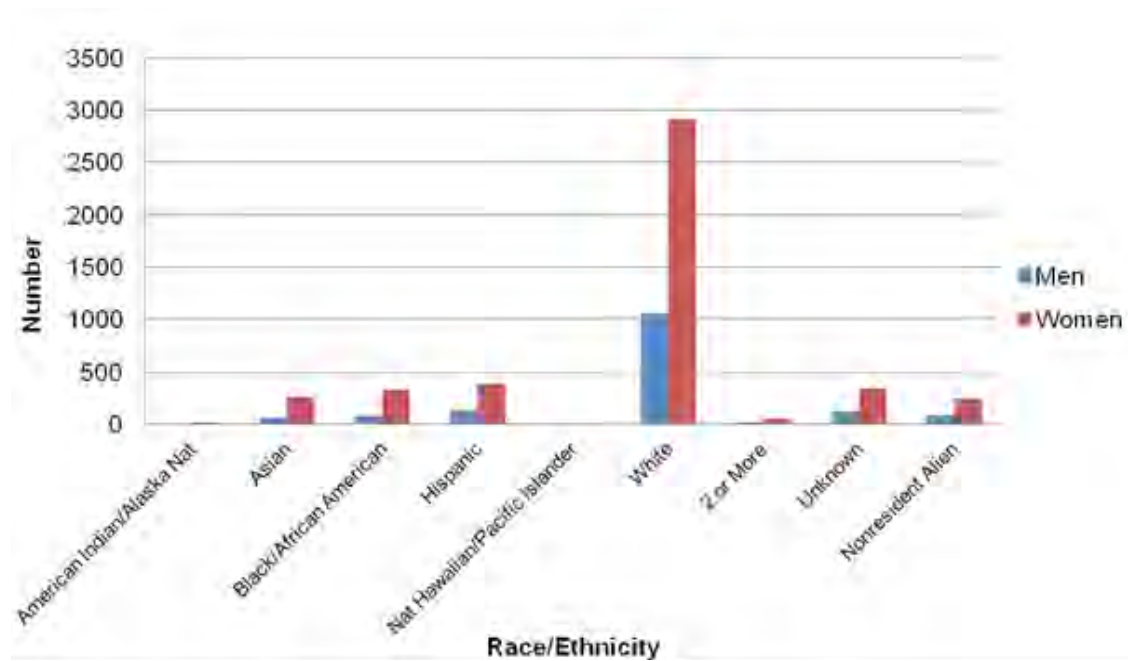
Source. Integrated Postsecondary Education Data System (IPEDS), Completions surveys (1985–2010; U.S. Department of Education, National Center for Education Statistics, n.d.). Compiled by APA Center for Workforce Studies.

Figure 3.4 and its accompanying data (see **Table 3.7**) show the numbers of degrees awarded (of the approximately 6,100 total) by both gender and racial/ethnic groups in the latest year available, with the minority awardees broken down into racial/ethnic groups. As the data indicate, the number of doctorates awarded to members of specific racial/ethnic groups is higher for women than men in all categories. However, the percentages within gender indicate a fair degree of similarity within ethnic groups, suggesting that the numbers are largely proportional to total numbers of male or female degree recipients. The exceptions are Asian women, African American women, and White men, for whom the percentages are higher, suggesting that the numbers of doctoral degrees awarded to these groups are somewhat greater than their representation by gender would predict (Appendix B contains additional data). However, the overall percentage of racial/ethnic minority doctorate recipients remains very small.

Comparing the 2012 totals (as rounded percentages) to 2013 U.S. Census estimates (rounded) of racial/ethnic minorities in the overall population, the gaps are dramatic: For Blacks/African Americans, the percentage of doctorates awarded in psychology is about 7%, compared to their presence at about 13% of the overall population; for Asians and Hawaiian/Pacific Islanders, it is about 5%, compared to composing 6% of the population; for Hispanics/Latino(a)s, it is about 9%, compared to being 17% of the population; for American Indian/Alaska Natives, it is 0%, compared to composing 1% of the population; and for Whites, it is about 65%, commensurate with their presence at about 63% of the overall U.S. population. These data may be driven by unequal access to higher education, differences by gender or race/ethnicity in interest in psychology, and a possible “leaky pipeline” of advancement in which some groups are more likely to drop out before completing their education.

FIGURE 3.4

2012 Psychology Doctorates Awarded by Gender and Race/Ethnicity



Source. Integrated Postsecondary Education Data System (IPEDS), Completions survey (2012; U.S. Department of Education, National Center for Education Statistics, n.d.). Compiled by APA Center for Workforce Studies.

Doctoral degree attainment has increased gradually or has remained fairly stable in most subfields.

TABLE 3.7

2012 Psychology Doctorates Awarded by Gender and Race/Ethnicity

Race/ethnicity	Men	Women	Race total
	<i>n</i> (%)	<i>n</i> (%)	
American Indian/Alaska Native	8 (0.5)	18 (0.4)	26
Asian	62 (4.0)	263 (5.8)	325
Black/African American	75 (4.8)	333 (7.3)	408
Hispanic	136 (8.7)	383 (8.4)	519
Native Hawaiian/Pacific Islander	1 (0.1)	2 (0.0)	3
White	1,058 (67.7)	2,909 (64.0)	3,967
Two or more	15 (1.0)	50 (1.1)	65
Unknown	124 (7.9)	336 (7.4)	460
Nonresident	83 (5.3)	249 (5.5)	332
Gender total	1,562	4,543	6,105

Note. Percentages represent percentages within gender.

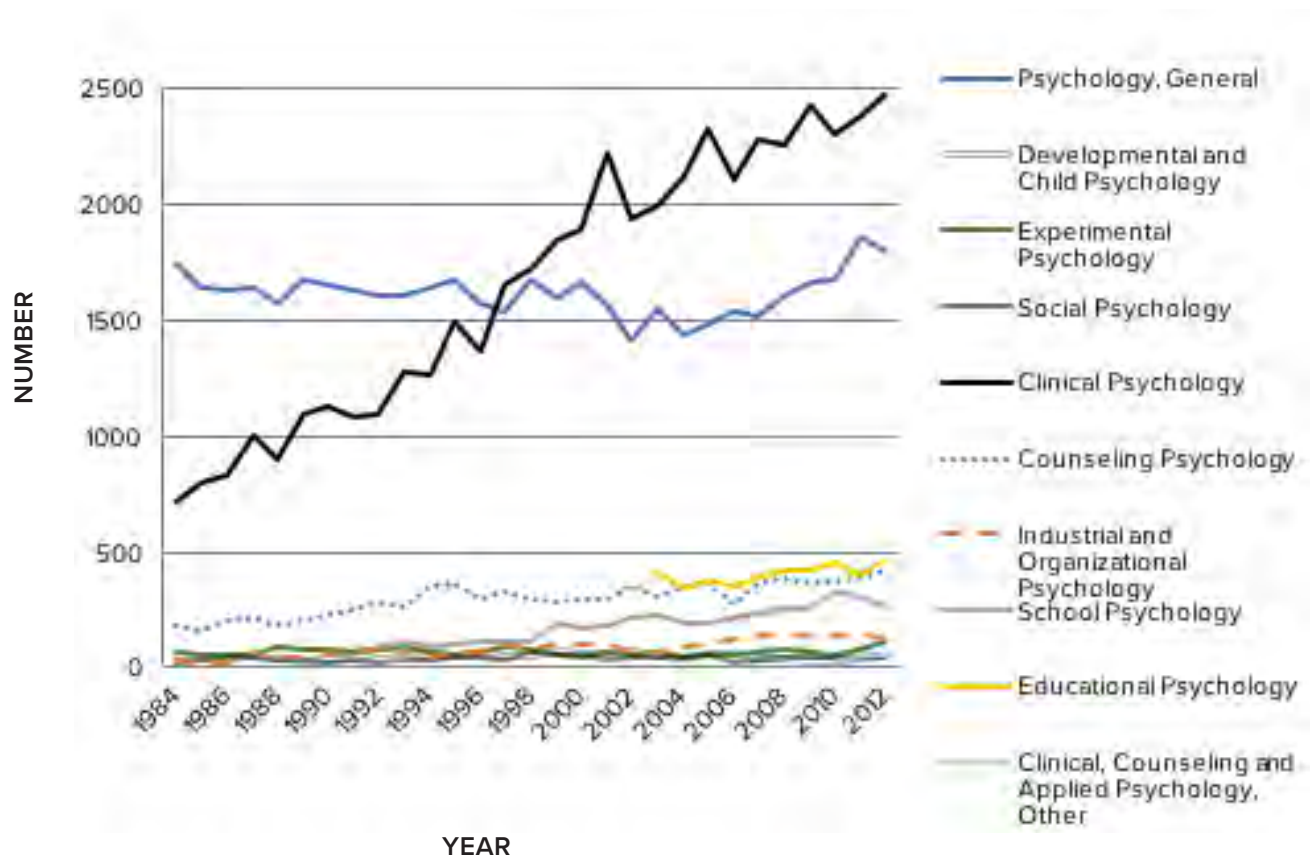
Source. Integrated Postsecondary Education Data System (IPEDS), Completions survey (2012; U.S. Department of Education, National Center for Education Statistics, n.d.). Compiled by APA Center for Workforce Studies.

Doctorates Awarded in Psychology Subfields

Figure 3.5 shows the general trends in doctoral attainment over time in the major subfields of psychology. As can be seen in these data, doctoral degree attainment has increased gradually or has remained fairly stable in most subfields. The exception is in clinical psychology, where doctoral degree attainment has increased dramatically.

FIGURE 3.5

Psychology Doctorates by Subfield, 1984–2012

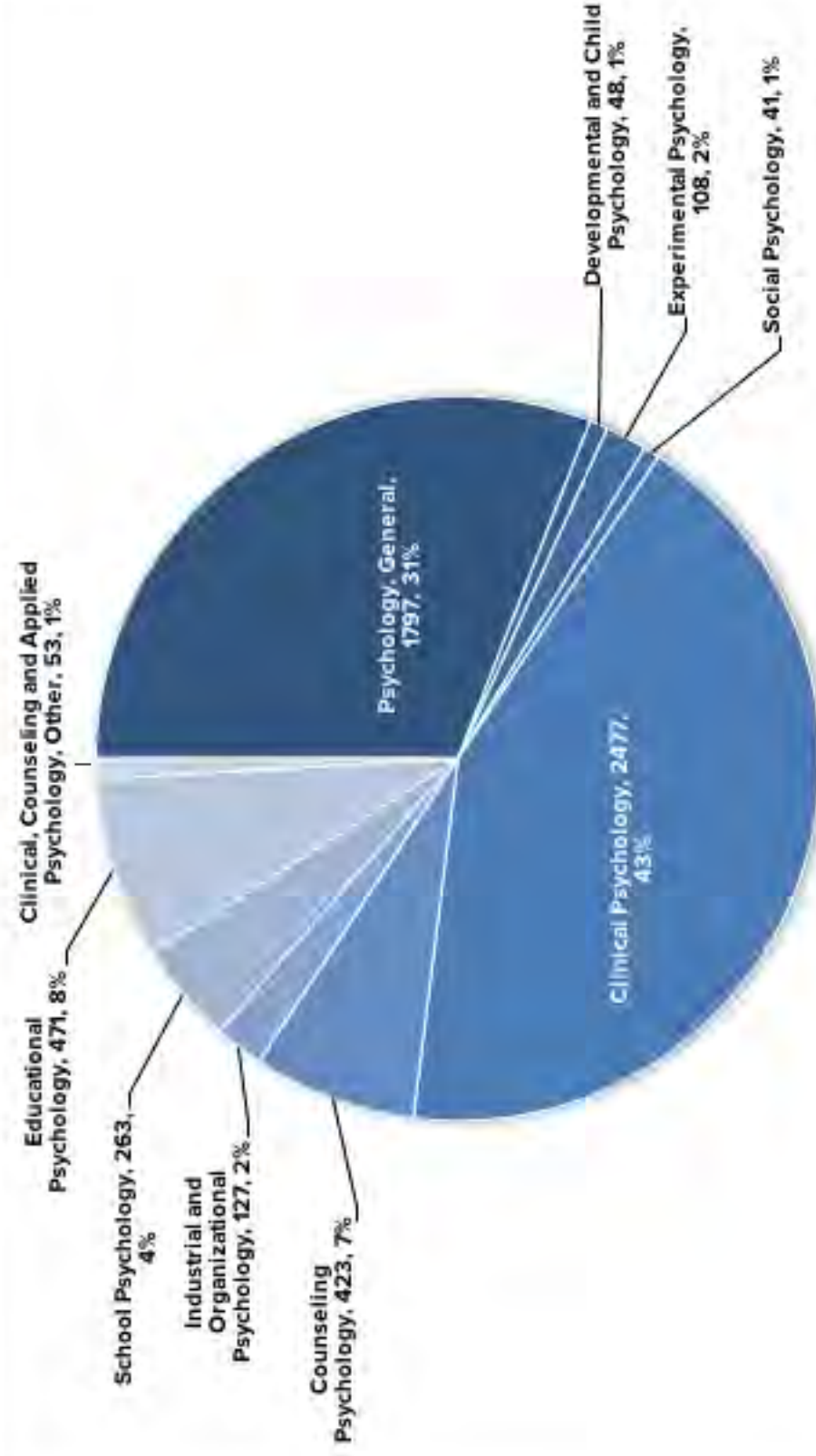


Source. Integrated Postsecondary Education Data System (IPEDS), Completions surveys (1984–2012; U.S. Department of Education, National Center for Education Statistics, n.d.). Compiled by APA Center for Workforce Studies.

The numbers and percentages of doctoral attainment for these subfields for the latest year available (2011–2012) can be seen in **Figure 3.6**. The figure shows the clear dominance of clinical psychology.

FIGURE 3.6

Psychology Doctoral Degrees by Subfield, 2011–2012

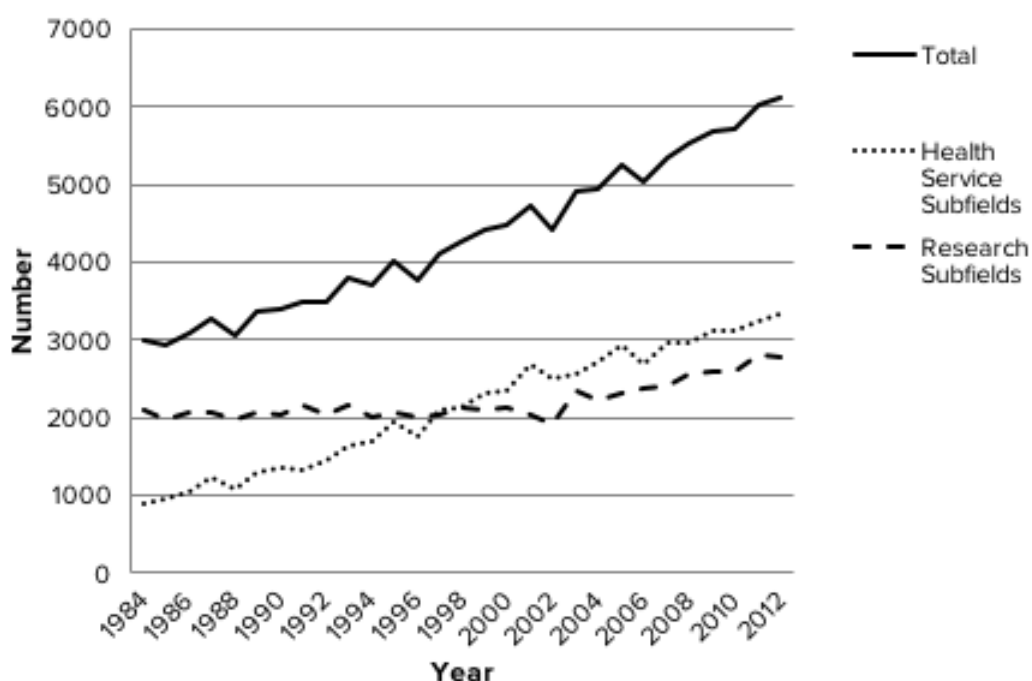


Source: Integrated Postsecondary Education Data System (IPEDS), Completions survey (2012; U.S. Department of Education, National Center for Education Statistics, n.d.). Compiled by APA Center for Workforce Studies.

Figure 3.7 and **Table 3.8** show trends in doctoral production in psychology subfields coded as either “health service provider” subfields or “research” subfields (see the table note for specific subfields included). As can be seen in the figure, doctoral attainment in health service provider subfields exceeds doctoral attainment in non-health-related subfields, a nascent trend noted in the 1995 report now borne out two decades later. Overall, research doctorates in psychology increased steadily over time, with nonhealth doctoral fields remaining fairly stable until about 2000, when they too began to rise. Health service provider subfield doctorates in psychology increased steadily through this time period, both in sheer numbers (from about 900 to 3,300) and in the percentage (from about 30% to 54%) of total doctorates awarded in psychology over almost three decades. This pattern is similar to the pattern for increases in clinical psychology degrees in the previous figures.

FIGURE 3.7

Health Service and Research Doctorates



Note. Health service provider and research subfields follow the same classifications as the APA member profiles (APA, n.d.-b; see Table 3: <http://www.apa.org/workforce/publications/13-member/table-3.pdf>). Health service provider subfields include: clinical psychology; counseling psychology; school psychology; clinical child psychology; geropsychology; health/medical psychology; family psychology; forensic psychology; applied behavior analysis; and clinical, counseling, and applied psychology. Other research subfields include: psychology, general; cognitive psychology and psycholinguistics; developmental and child psychology; experimental psychology; personality psychology; physiological psychology/psychobiology; social psychology; psychometrics and quantitative psychology; community psychology; industrial and organizational psychology; educational psychology; environmental psychology; applied psychology; and psychology. Other subfield titles are from the Integrated Postsecondary Education Data System (IPEDS) Classification of Instructional Programs (CIP) codes from the 2012 Completions survey. Some CIP code titles changed over time, and some CIP codes were not available in all years.

Source. IPEDS, Completions surveys (1984–2012; U.S. Department of Education, NCES, n.d.). Compiled by APA Center for Workforce Studies.

TABLE 3.8

Health Service and Research Doctorates

Year	Health service provider subfields	Research subfields	Total	% health service provider
1984	891	2,099	2,990	29.8
1986	1,045	2,051	3,096	33.8
1988	1,082	1,959	3,041	35.6
1990	1,360	2,029	3,389	40.1
1992	1,461	2,032	3,493	41.8
1994	1,705	2,004	3,709	46.0
1996	1,766	1,998	3,764	46.9
1998	2,135	2,132	4,267	50.0
2000	2,353	2,112	4,465	52.7
2002	2,502	1,899	4,401	56.9
2004	2,705	2,228	4,933	54.8
2006	2,672	2,373	5,045	53.0
2008	2,958	2,566	5,524	53.5
2010	3,114	2,605	5,719	54.5
2012	3,318	2,787	6,105	54.3

Note. Health service provider and research subfields follow the same classifications as the APA member profiles (APA, n.d.-b; see Table 3: <http://www.apa.org/workforce/publications/13-member/table-3.pdf>). Health service provider subfields include: clinical psychology; counseling psychology; school psychology; clinical child psychology; geropsychology; health/medical psychology; family psychology; forensic psychology; applied behavior analysis; and clinical, counseling, and applied psychology. Other research subfields include: psychology, general; cognitive psychology and psycholinguistics; developmental and child psychology; experimental psychology; personality psychology; physiological psychology/psychobiology; social psychology; psychometrics and quantitative psychology; community psychology; industrial and organizational psychology; educational psychology; environmental psychology; applied psychology; and psychology. Other subfield titles are from the Integrated Postsecondary Education Data System (IPEDS) Classification of Instructional Programs (CIP) codes from the 2012 Completions survey. Some CIP code titles changed over time, and some CIP codes were not available in all years.

Source. IPEDS, Completions surveys (1984–2012; U.S. Department of Education, NCES, n.d.). Compiled by APA Center for Workforce Studies.

Psychology Subfield Changes and Gender

Table 3.9 presents data regarding psychology degrees awarded to men and women for three benchmark years, along with an indication of average yearly change in number of degrees awarded from 1993 to 2011. The table supports the trends noted throughout this section—that is, numbers of degrees awarded to women have increased on average across almost all psychology subfields, whereas those awarded to men have decreased. The notable exception in these data is the subfield encompassing experimental, physiological, and comparative psychology, in which doctorates attained by both women and men have decreased; most likely some of this decrease is because the field names have been reconceptualized as neuropsychology or other titles.

TABLE 3.9

Numbers of Degrees Awarded in 1990, 2002, and 2012 and Average Annual Change From 1990 to 2012 in Psychology Doctoral Production by Gender and Major Field

Major field	1990	2002	2012	% change, 1990–2012
Clinical				
Men	548	363	288	-47
Women	781	847	941	20
Total	1,329	1,210	1,229	-8
Counseling				
Men	184	148	118	-36
Women	280	321	277	-1
Total	464	469	395	-15
School				
Men	28	21	13	-54
Women	53	68	107	102
Total	81	89	120	48
Developmental				
Men	47	30	30	-36
Women	111	143	176	59
Total	158	173	206	30
Educational				
Men	29	16	17	-41
Women	69	38	50	-28
Total	98	54	67	-32
Experimental, physiological, and comparative				
Men	117	87	57	-51
Women	80	114	77	-4
Total	197	201	134	-32
Industrial–organizational				
Men	71	69	93	31
Women	53	85	129	143
Total	124	154	222	79

Table 3.9 (continued)

Social and personality				
Men	63	80	90	43
Women	102	117	155	52
Total	165	197	245	48
Other fields ^a				
Men	274	246	341	24
Women	377	402	654	73
Total	651	648	995	53
Total, all fields				
Men	1,361	1,060	1,047	-23
Women	1,906	2,135	2,566	35
Total	3,267	3,195	3,613	11

Note. National Science Foundation (NSF) categories change slightly across years.

^aThe category “other fields” includes 2012 NSF categories of behavioral analysis, cognitive psychology and psycholinguistics, human development and family studies, health and medical psychology, family psychology, human development and family studies, neuropsychology/physiological psychology, psychometrics, and quantitative psychology.

Source. NSF (1991, 2003, 2013), Survey of Earned Doctorates.

Educational Costs, Support, and Student Debt

There has been a great deal of attention given to the issue of student debt and rising costs of higher education. In 2010, 36% of households with people between 20 and 40 years of age had education debt (averaging \$8,500), compared to 1989 levels of 14% of households (with \$3,517 in debt; Leonhardt, 2014). A study by Fagan, Ax, Liss, Resnick, and Moody (2007) of clinical and counseling psychologists, interns, and residents found that 38% of students and 22% of working psychologists believed that the time and financial costs of becoming a psychologist outweighed the long-term benefits, and an additional 21% and 23%, respectively, were unsure about whether the benefits were outweighed by the costs. This study did not adjust for graduate school-incurred debt, and it may not generalize to other subfields of psychology. Robiner, Ax, Stamm, and Harowski's (2002) study indicated that predoctoral interns anticipated starting salaries at almost \$2,000 less than their projected living expenses, and Nagle, Suldo, Christenson, and Hansen's (2004) study of school psychology graduate students found that insufficient salaries were a deterrent to their seeking academic positions. Thus, it is worth examining the cost and debt involved in graduate education in psychology. This section of the report explores these concerns, including whether there are patterns of differences by gender or other status variables that may affect some women (e.g., women of color).

Graduate Tuition

Tables 3.10 and 3.11 and Figure 3.8 present data from the APA Graduate Study in Psychology Survey regarding the cost of graduate tuition in psychology programs over time. Table 3.10 shows the costs for two benchmark years, 2014 and 2004, for both master's and doctoral students because many programs admit students

at the master's level and expect a master's degree to be completed on the way to a doctorate. Table 3.11 averages the master's and doctoral tuition costs and presents six benchmark years of data, with corrections for inflation. Figure 3.8 shows a graphic representation of the tuition increases, using the inflation-adjusted dollar amounts from Table 3.11. As both these tables and the figure indicate, tuition costs generally have increased in graduate psychology, particularly at the doctoral level for nonresidents, with the average total cost of a 4-year or 5-year education located approximately in the \$60,000–\$75,000 range for residents and \$85,000–\$110,000 for nonresidents in tuition alone (this does not factor in books, technology tools, fees, and lost/foregone wages for these years). These costs are reflected in both current and adjusted dollars in these data (see Appendix B for additional data).

[Table 3.9] supports the trends noted throughout this section—that is, numbers of degrees awarded to women have increased on average across almost all psychology subfields, whereas those awarded to men have decreased.

TABLE 3.10

Doctoral and Master's Tuition, 2014 and 2004

Variable		Doctoral tuition, residents per year				Doctoral tuition, nonresidents per year			
		2014		2004		2014		2004	
N depart- ments	Valid	299		246		294		242	
	Missing	298		339		303		343	
		Current	Adjusted ^a	Current	Adjusted	Current	Adjusted	Current	Adjusted
M		\$16,697	\$16,341	\$11,255	\$13,880	\$24,730	\$24,203	\$13,297	\$16,398
Mdn		\$11,532	\$11,286	\$6,870	\$8,472	\$23,936	\$23,426	\$12,470	\$15,378
		Master's tuition, residents per year				Master's tuition, nonresidents per year			
		2014		2004		2014		2004	
N depart- ments	Valid	218		249		214		244	
	Missing	379		336		383		341	
		Current	Adjusted	Current	Adjusted	Current	Adjusted	Current	Adjusted
M		\$11,729	\$11,479	\$7,229	\$8,915	\$19,684	\$19,229	\$12,742	\$15,714
Mdn		\$8,702	\$8,517	\$4,524	\$5,579	\$18,213	\$17,825	\$11,385	\$14,040

^aWhen using variables measured in terms of dollars (such as tuition), care must be taken when interpreting changes in these variables over time. To correct for the distortion caused by rising prices in a dollar denominated variable, a “constant” or “inflation-adjusted” variable must be calculated. Constant dollars for each year in this table (and throughout this report) were adjusted for inflation using the Consumer Price Index data for the year 2013 (see http://www.bls.gov/data/inflation_calculator.htm).

Source. Graduate Study in Psychology, selected years (APA, n.d.-a). Compiled by APA Center for Workforce Studies.

Tuition costs generally have increased in graduate psychology, particularly at the doctoral level for nonresidents, with the average total cost of a 4-year or 5-year education located approximately in the \$60,000–\$75,000 range for residents and \$85,000–\$110,000 for nonresidents in tuition alone.

TABLE 3.11

Mean Annual Tuition in Graduate Departments of Psychology, Adjusted

Academic year	Resident		Nonresident	
	Current	Adjusted	Current	Adjusted
1998	\$6,795	\$9,711	\$10,058	\$14,375
2000	\$7,026	\$9,505	\$10,842	\$14,667
2004	\$7,325	\$9,033	\$11,698	\$14,426
2010	\$10,943	\$11,691	\$17,277	\$18,458
2012	\$12,655	\$12,840	\$19,476	\$19,761
2014	\$14,213	\$13,892	\$22,207	\$21,705

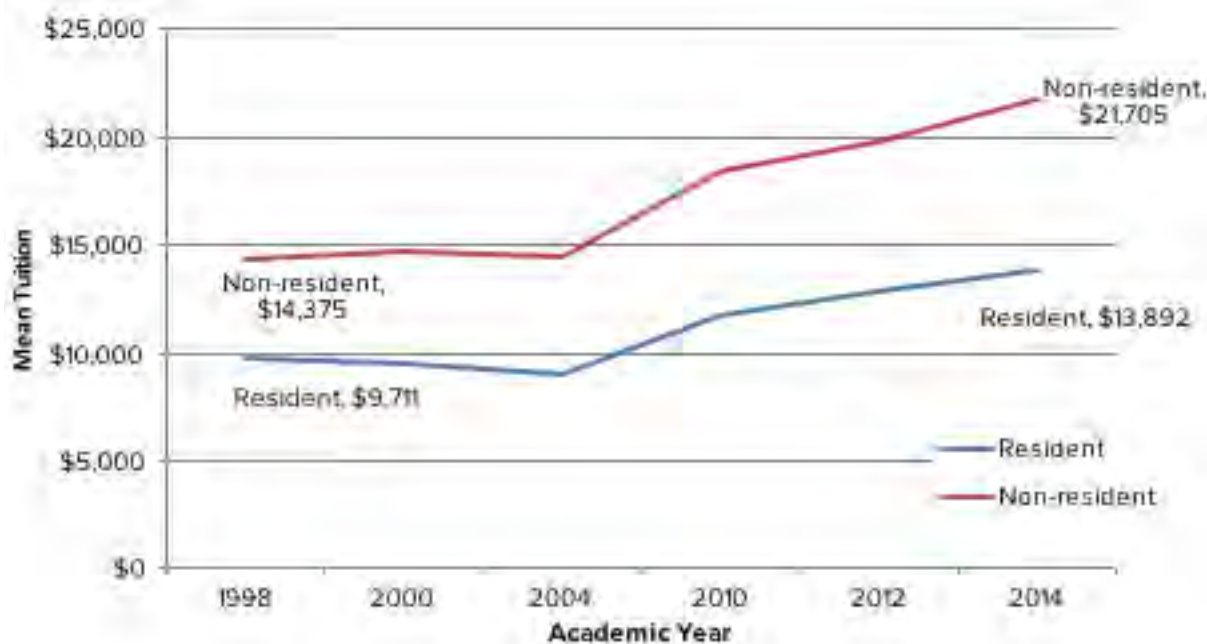
Note. Tuition amounts have been collapsed across master’s and doctoral programs. “Current” refers to salary in that academic year; adjusted salaries were converted from the specified academic year to 2013 dollars using the Bureau of Labor Statistics Consumer Price Index Inflation Calculator (<http://www.bls.gov/data/inflationcalculator.htm>).

Source. Graduate Study in Psychology, selected years (APA, n.d.-a). Compiled by APA Center for Workforce Studies.

Determining the value of an education and acceptable levels of student debt increasingly are being linked to the extent to which specific fields of study lead to employment opportunities and compensation commensurate with the levels of debt.

FIGURE 3.8

Annual Tuition in Graduate Departments of Psychology (Inflation-Adjusted Dollars)



Note. Tuition amounts have been collapsed across master's and doctoral programs. Adjusted salaries were converted to 2013 dollars using the Bureau of Labor Statistics Consumer Price Index Inflation Calculator (<http://www.bls.gov/data/inflation-calculator.htm>).

Source. Graduate Study in Psychology, selected years (APA, n.d.-a). Compiled by APA Center for Workforce Studies.

Financial Support

Possible mitigating factors in understanding the impact of rising costs of tuition are levels and kinds of student support (such as tuition remission, assistantships, housing, and child care support) offered by some institutions. Again, using data from the Graduate Study in Psychology Survey (APA, n.d.-a), **Tables 3.12, 3.13, and 3.14** present a summary of data on the availability of these kinds of student financial supports (unadjusted numbers).

As Tables 3.12 and 3.13 indicate, most students in doctoral programs in psychology receive some sort of financial assistance, and both the amounts and percentages have increased over time. Table 3.14 suggests that most institutions offer access to (graduate) housing, and many also have child care available, although these data do not include information on costs of either kind of resource. Many students also have health care benefits associated with student status, but many postdoctoral trainees do not have full benefits available to regular employees in their same institution, such as health insurance, retirement/pension, or federal programs such as the Family Medical Leave Act (Task Force on Parental and Family Leave for Research Trainees, 2012). The access to, use of, and costs of child care are particularly important to ascertain because the overall growth in numbers of psychology graduate students is primarily among women, who traditionally have held and

continue to hold most of the responsibility for child care in their families (Bianchi, Robinson, & Milkie, 2006; Galinsky, Aumann, & Bond, 2011; Mainiero & Sullivan, 2005; also see the Fall 2009 issue of the American Association of University Women’s *Outlook* magazine). (See Appendix B for additional tables.)

TABLE 3.12
Financial Aid as Assistantships and Scholarships, 2002–2003 and 2012–2013

Financial Aid Type	Doctoral departments			
	Mean stipend		Mean hours worked per week	
	2012–2013	2002–2003	2012–2013	2002–2003
Teaching assistantship	\$13,093	\$9,978	16.7	16.7
Research assistantship	\$12,621	\$9,800	16.6	16.5
Traineeship	\$16,462	\$12,515	14.1	14.7
Fellowship/scholarship	\$13,755	\$9,943	8.35	7.8

Source. Graduate Study in Psychology, selected years (APA, n.d.-a). Compiled by APA Center for Workforce Studies.

TABLE 3.13
Percentage of Students Receiving Financial Assistance in Doctoral Departments, 2002–2003 and 2012–2013

Variable	Doctoral Departments			
	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>n</i>
% of full-time students receiving financial assistance, 2002–2003	62.1	37.1	75	380
% of full-time students receiving financial assistance, 2012–2013	74.8	29.7	90	387

Source. Graduate Study in Psychology, selected years (APA, n.d.-a). Compiled by APA Center for Workforce Studies.

TABLE 3.14

Housing and Child Care Available: 2003, 2010, and 2014

Year	Departments, <i>n</i>	Housing available, <i>n</i>	% housing available	Departments, <i>n</i>	Child care available, <i>n</i>	% child care available
2003	581	271	46.6			
2010	575	431	74.7	576	368	63.8
2014	597	429	71.9	597	382	64.0

Source. Graduate Study in Psychology, selected years (APA, n.d.-a). Compiled by APA Center for Workforce Studies.

Debt Levels of Doctoral Recipients

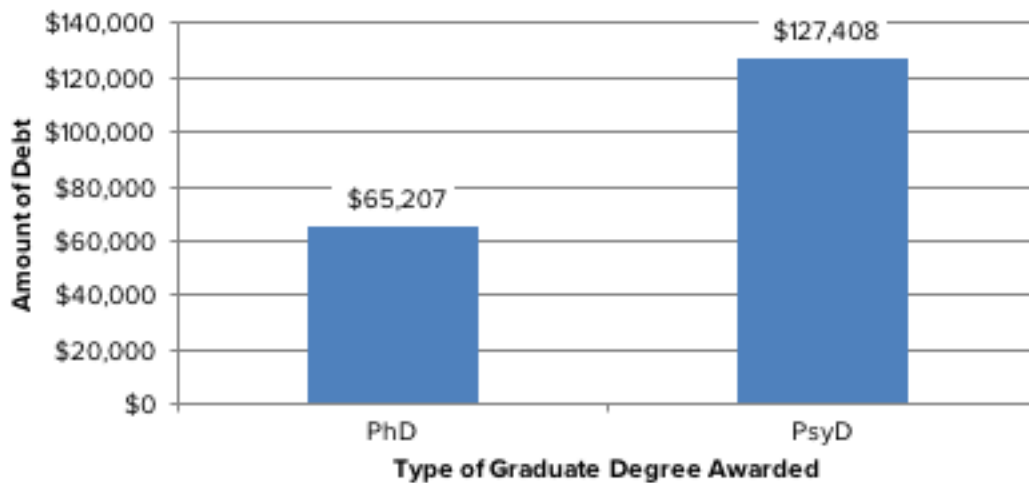
Determining the value of an education and acceptable levels of student debt increasingly are being linked to the extent to which specific fields of study lead to employment opportunities and compensation commensurate with the levels of debt that the graduate/new employee has accrued. Within psychology, questions may be posed about possible differences between degrees attained (PhD vs. PsyD) as well as whether there are systematic differences of the psychology doctorate population, such as by gender, age, and racial/ethnic minority status.

The figures in this section portray the levels of debt accrued by doctoral recipients in psychology for the survey year 2009 (the most recent year of data available) and in pooled data for the years 1997, 1999, 2001, 2003, 2005, 2007, and 2009 (from the Doctorate Employment Survey; APA, n.d.-c). Analyses of variance (ANOVAs) examining the effects of degree type (PhD vs. PsyD), gender, and age were completed (using both means and medians, with similar results; means are presented here). (See Appendix B for additional data.)

Figure 3.9 shows the results for the 2009 data, with totals adjusted for inflation to permit comparison to 2013 dollars (unadjusted dollar amounts were approximately \$60,000 for PhDs, and \$117,000 for PsyDs). Analyses indicated a main effect for degree type, indicating that students pursuing PsyD degrees ($n = 264$) appear to accumulate almost twice as much educational debt as do students attaining PhD degrees ($n = 565$). Presumably, this difference is driven by more PsyD programs being in free-standing professional programs in private, more costly institutions, whereas PhD programs are more likely to be offered in public institutions with lower tuition costs and more sources of student support (e.g., teaching assistantships). However, given that PsyD programs, on average, require 1 less year to complete than do PhD programs (APA, 2011), presumably due to lower research expectations, these debt data are particularly striking. Although not graphically represented here (see Appendix B), there also was an interaction between degree type and age, suggesting that older (33 years of age or older; $n = 341$) PhD students accrue significantly more debt than do younger (32 years of age or younger; $n = 488$) PhD students. For PsyD graduates, younger students graduated with slightly more debt than older students, but this difference was not statistically significant.

FIGURE 3.9

Mean Level of Graduate School Debt for PhD and PsyD Graduates (Inflation-Adjusted Dollars)



Note. The legend includes only Doctor of Philosophy (PhD) and not Doctor of Psychology (PsyD). There was significantly greater mean debt for PsyD graduates than PhD graduates, $t(831) = 15.373$, $p < .001$.

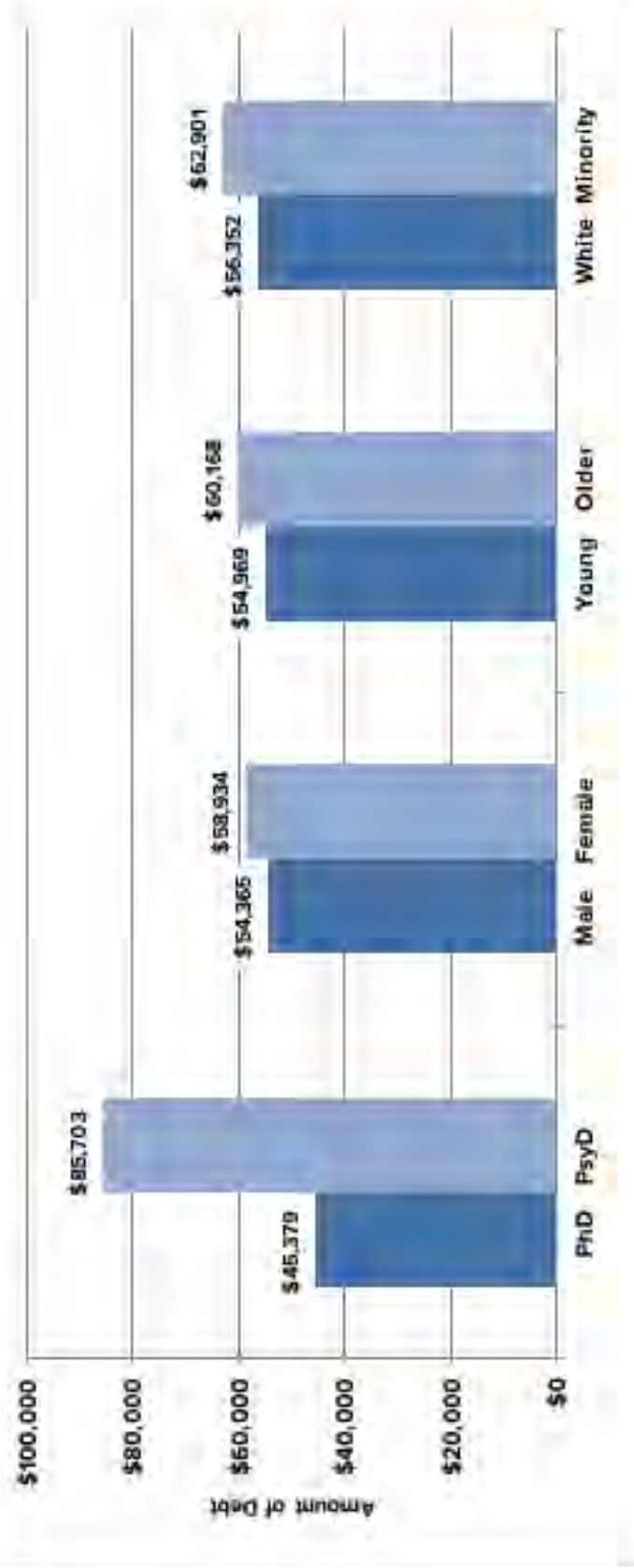
Source. Doctorate Employment Survey, 2009 (APA, n.d.-c). Compiled by APA Center for Workforce Studies.

Student debt is such an important issue that an attempt was made to determine whether the 2009 data were representative of patterns of previous years of the Doctorate Employment Survey data by performing the same analyses on pooled data for every other year from 1997 to 2009. In addition, an effort was made to examine the limited data on members of racial/ethnic minority groups, possible in pooled data. (Note: Because the data were pooled, dollars were not adjusted for inflation; the overall numbers thus are low compared to 2013 dollars, but the focus of the analysis was on differences among subgroups.)

Figure 3.10 shows the results of these analyses. There were significant main effects for degree, gender, age, and race/ethnicity as well as an interaction between age and degree (not shown here; see Appendix B). Recipients of PsyD degrees ($n = 2,377$) graduated with significantly more debt than did those who earned PhDs ($n = 5,433$). Female doctoral students ($n = 5,586$) graduated with significantly more debt than did male students ($n = 2,224$). Older students ($n = 3,765$) graduated with significantly more debt than did younger students ($n = 4,045$). Minority students graduated with significantly more debt than did White graduates, and this effect was strongest for those attaining PsyD degrees (\$95,000 for minority students vs. \$84,000 for White students, about \$11,000 in unadjusted dollars). Given lower earning for these students (see Table 4.11, Median Salaries of Employed Recent Doctoral Degree Recipients Across Fields 2010), this creates significant challenges for their financial viability and their retention in the field.

FIGURE 3.10

Mean Graduate School Debt by Degree Type, Gender, Age, and Minority Status



Note. “Young” graduates were categorized as 32 years or younger; “older” graduates were categorized as 33 years or older. There was significantly greater mean debt for Doctor of Psychology (PsyD) graduates, $t(7965) = 38.038, p < .001$; female graduates, $t(7872) = 3.881, p < .001$; older graduates, $t(7868) = 4.891, p < .001$; and minority graduates, $t(7815) = 4.658, p < .001$. PhD = Doctor of Philosophy.

Source. Doctorate Employment Survey, pooled data from years 1997, 1999, 2001, 2003, 2005, 2007, 2009 (APA, n.d.-c). Compiled by APA Center for Workforce Studies.

Overall, these results regarding student debt suggest that debt levels have risen and that women students, particularly older and minority women, emerge from their training programs with considerably higher debt than do their male, White, younger counterparts. Thus, full-time employment status and high levels of compensation become critically important as women psychologists enter the workforce. The following section examines perceptions of the job market in psychology and then first positions actually attained by new graduates in psychology, including starting salaries.

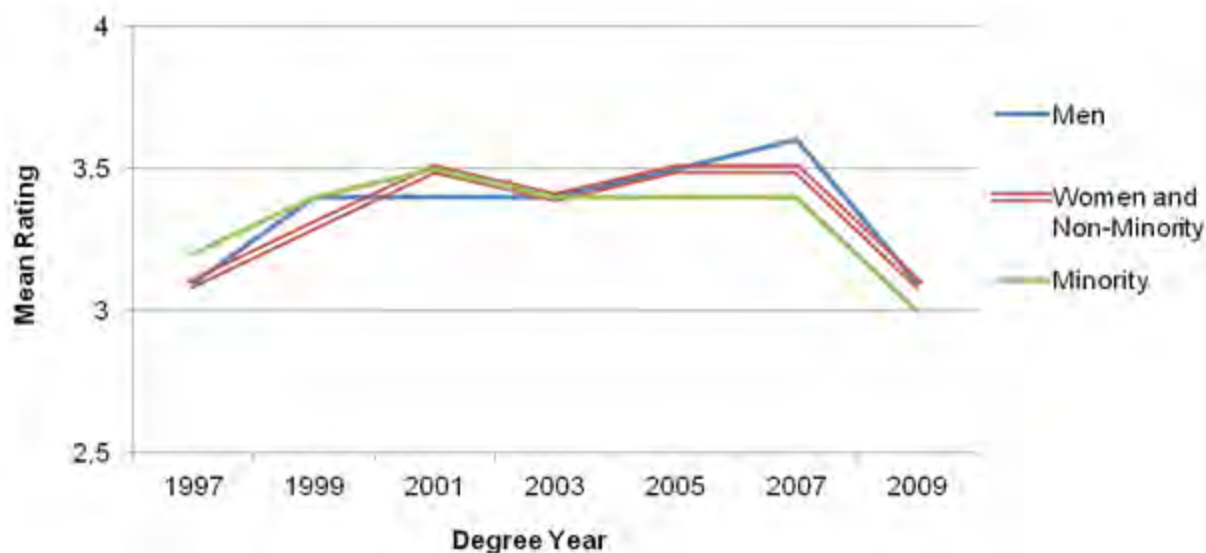
Job Market Perceptions and First Positions Obtained by New Doctorate Recipients

Despite the high costs of education and training, new students seek training in a field if they believe that the prospects for employment are robust. **Figure 3.11** shows the perceptions of the job market in psychology by new doctorate recipients who were respondents to the Doctorate Employment Survey (APA, n.d.-c). As can be seen in the figure, perceptions of the job market have held fairly steady in the “fair” to “good” range over time. Perceptions also appear to be similar for both men and women as well as for racial/ethnic minority and nonminority/White doctorate recipients (indeed, women and nonminorities exhibit identical patterns). Thus, these data suggest that women—including racial/ethnic minority women—as well as men, tend to view their employment prospects in psychology fairly positively, although the dips in the most recent year available (2009) suggest the need for vigilance in tracking perceptions in the future (see Appendix B for additional data). Furthermore, the positive outlook is belied by real threats to viability for women, racial/ethnic minorities, and individuals with disabilities who may require a longer educational path and thus may graduate with higher debt but lower earning potential. Further research is needed to both investigate this discrepancy and prepare new psychologists with strategies for managing postgraduation finances.

Overall, these results regarding student debt suggest that debt levels have risen and that women students, particularly older and minority women, emerge from their training programs with considerably higher debt than do their male, White, younger counterparts.

FIGURE 3.11

Perception of Job Market of New Doctorate Recipients in Psychology by Gender and Race/Ethnicity



Note. Means were calculated using the following coding scheme: 1 = *bleak*, 2 = *poor*, 3 = *fair*, 4 = *good*, 5 = *excellent*. The following race/ethnicity categories were collapsed to create the “minority” variable: Black, Hispanic, Asian, American Indian, and Pacific Islander. “Nonminority” variable = White. Mean ratings across years for women and nonminorities were identical.

Source. Doctorate Employment Survey, selected years (APA, n.d.-c). Compiled by APA Center for Workforce Studies.

Tables 3.15 and 3.16 present data regarding approximately 7,600 identified first positions obtained by recent graduates of accredited doctoral programs (reproduced from the 2012 Commission on Accreditation Annual Report). As these are students trained in health service provider–related programs (clinical, counseling, and school psychology), there is lag time between degree attainment and licensure; thus, these numbers represent students who graduated prior to 2012 and who were not yet licensed. Table 3.15 shows the initial employment setting, and Table 3.16 shows the initial employment activity of these recent graduates. The tables together suggest that new professionals in health service provider psychology subfields enter academic and medical settings primarily (about 20% and 25%, respectively), with many also entering independent practice (about 19%), and smaller but about equal numbers entering schools or community mental health settings (about 11% and 10%, respectively). Accordingly, most of them focus on assessment, consultation, and psychotherapy (averaging about 56%), with substantial numbers involved in supervision, research, teaching, and administration (averaging about 28%). Although these data do not contain specific reference to women, the following section of this chapter examines gender patterns within the health service provider programs themselves.

TABLE 3.15

Initial Employment Setting of Recent Graduates of Accredited Programs

Employment setting (select all that apply)	Total <i>N</i> of former students employed in each setting	Program mean % of former students employed in each setting
Academic teaching	1,161	20.44
Community mental health center	1,096	10.48
Consortium	58	1.14
Correctional facility	255	2.74
Health maintenance organization	122	1.24
Hospital/medical center	1,719	25.45
Independent practice	1,699	18.54
Psychiatric facility	268	3.83
School district/system	634	11.05
University counseling center	533	7.56
Other (e.g., military, government)	949	12.31

Note. Students successfully completed programs between the 2008–2009 and 2010–2011 academic years and were not yet licensed; 372 programs provided the initial setting for at least one graduate ($n = 7,595$). Percentages may exceed 100 because graduates can select two or more settings.

Source. Commission on Accreditation, 2012 Annual Report Online (APA, 2013).

TABLE 3.16

Initial Employment Activity of Recent Graduates of Accredited Programs

Employment activity (select all that apply)	Total <i>N</i> of former students engaged in each activity	Program mean % of former students engaged in each activity
Administration	1,660	21.56
Assessment	4,238	57.63
Consultation	3,464	47.99
Psychotherapy	4,852	61.58
Research	1,379	26.60
Supervision	2,179	33.72
Teaching	1,560	26.56
Other	464	6.29

Note. Students successfully completed programs between the 2008–2009 and 2010–2011 academic years and were not yet licensed. Percentages may exceed 100 because graduates can select two or more activities.

Source. Commission on Accreditation, 2012 Annual Report Online (APA, 2013).

Given the data (above) related to student debt generally being higher for those graduating with PsyD degrees than PhD degrees, it is worth examining starting salaries related to degree type to determine whether the additional financial burden of obtaining a professional degree is offset by higher salaries postgraduation. Unfortunately, the opposite appears to be the case. In a Center for Workforce Studies (CWS) unpublished analysis of the 2009 Doctorate Employment Survey (APA, n.d.-c), overall, starting salaries averaged about \$65,000 for those with PhD degrees, compared to about \$60,000 for those who earned PsyD degrees. When separated into health service provider subfields (the largest numbers of graduates) as well as research and other subfields, the difference held in the health service provider subfields (where women predominate) but reversed slightly in the research and other subfields, in that PhDs in the latter arena earned about \$67,000 and PsyDs about \$70,000 (perhaps due to the location of many PsyDs in medical settings; see Appendix B for detailed tables). Taken together, these data suggest that women, particularly racial/ethnic minority and older women, who graduate with PsyD degrees and enter the health service provider subfields of the psychology workforce may be faced with high levels of debt and little chance to recoup debt losses through more robust salaries, at least initially.

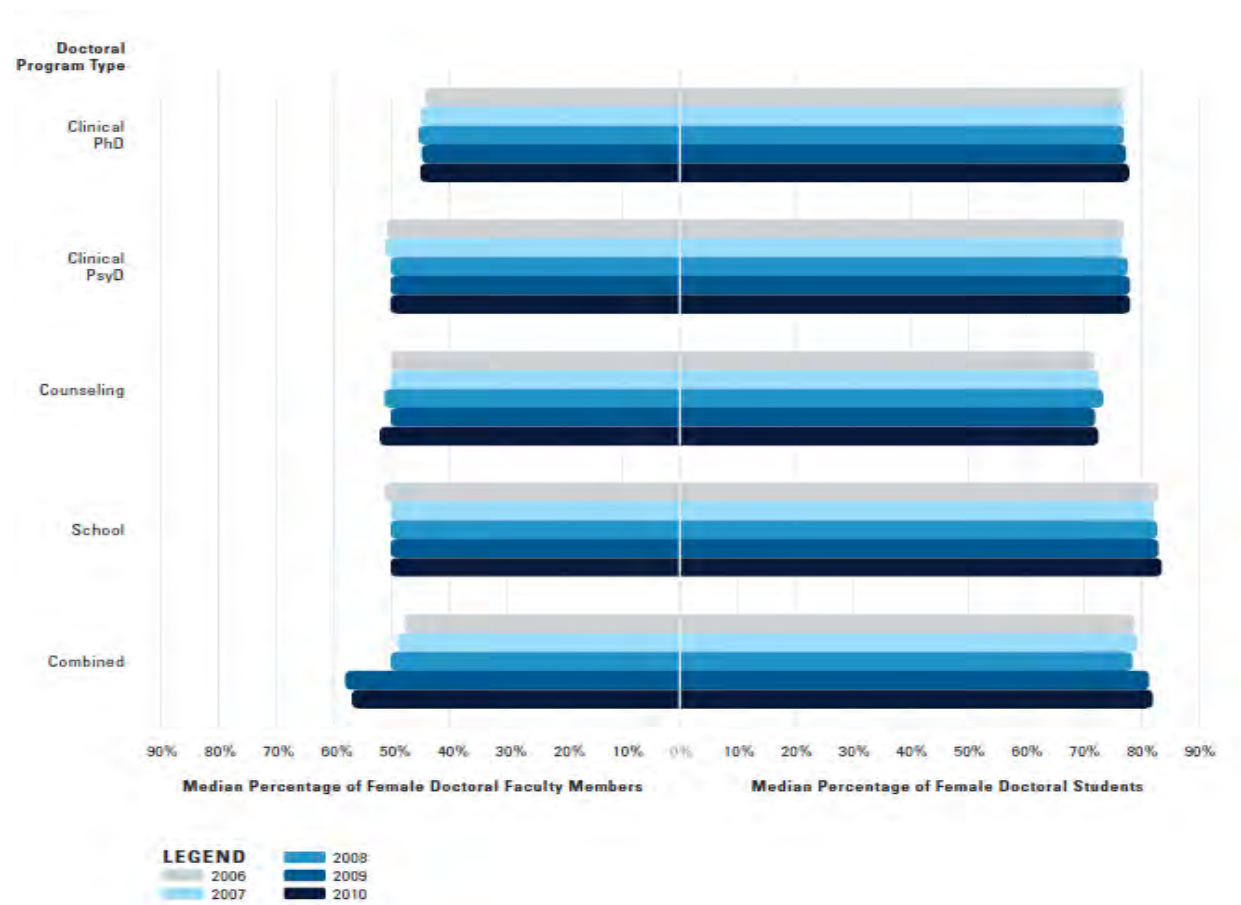
Trends in Practitioner Training Programs

The data in this report so far indicate clearly that the dramatic growth in psychology over the past several decades is among women, including racial/ethnic minority women, and in health service provider subfields. Given these trends, it is important to examine graduate education in health service provider doctoral training programs in particular to determine whether there are patterns worth noting in the distribution and participation of women in these programs. This section reproduces a tiny sampling of information from the Commission on Accreditation Summary Report for the years 2006–2010 (APA, 2011).

Figures 3.12 and 3.13 show the percentages of female and racial/ethnic minority students and faculty in academic doctoral programs, and **Figures 3.14 and 3.15** show the percentages of female and racial/ethnic minority students and supervisors in internships from 2006 through 2012. As can be seen in these figures, (a) the largest numbers (about 83%) of female students are found in school psychology programs, (b) the percentages (about 79%) of female students overall are substantially greater than the percentages of female faculty (hovering at about 50% in most programs), and (c) clinical PhD programs have fewer female faculty (about 45%) than all other programs. In internship settings, the percentages of female supervisors and female students are a bit more balanced, but there are less female supervisors (about 58% over 5 years) than female interns (about 78%) overall, and clinical PhD programs again have the lowest numbers (about 54%) of female supervisors. For racial/ethnic minorities, the same patterns hold, with percentages of minority students (about 20%–25% in most programs, but 35% in counseling psychology programs) substantially higher than percentages of minority faculty (which vary between 10% and 20%) over the 5-year span. Again, clinical PhD programs appear to have the lowest percentages (about 10%) of minority faculty, and school psychology is a bit more balanced but only because the percentages (less than 20%) of minority students are very low. The internship supervision situation is much the same, with percentages of racial/ethnic minority students (about 24%) exceeding the percentages of minority supervisors (about 16%) over the 5-year period.

FIGURE 3.12

Median Percentage of Female Faculty Members and Female Students by Program Type

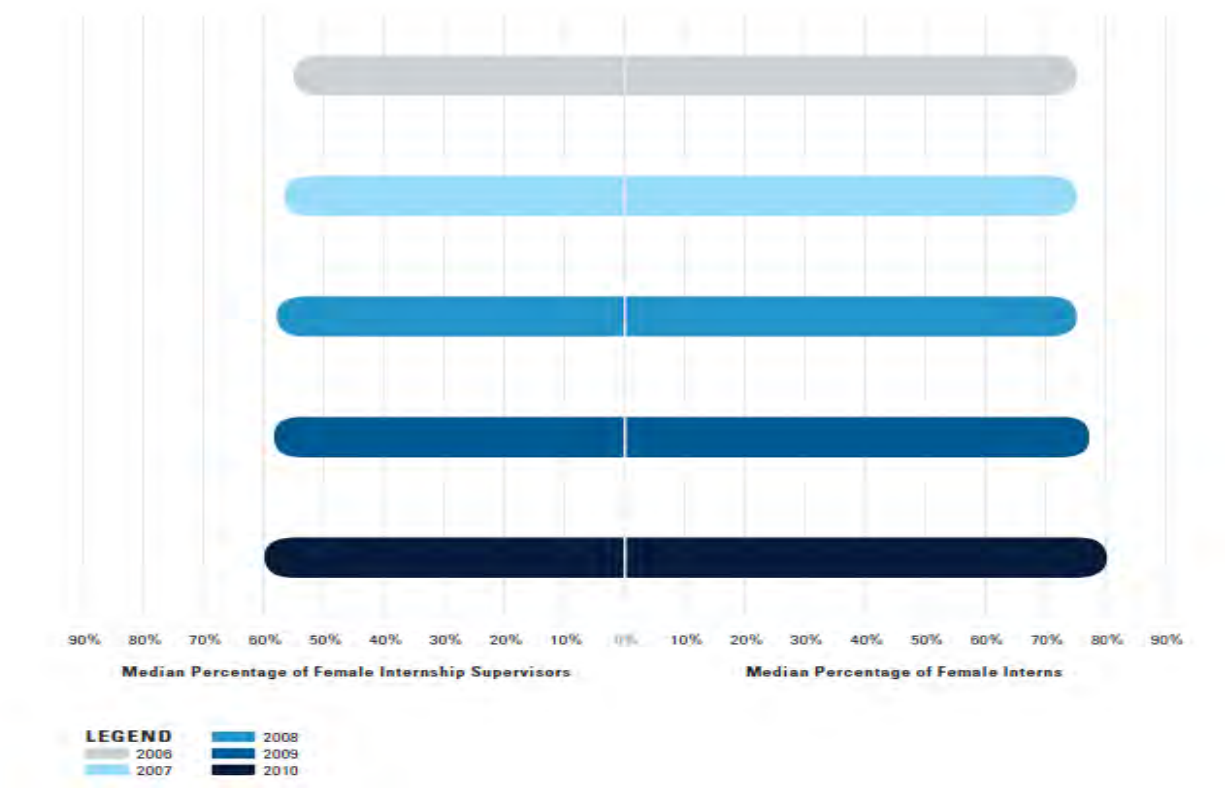


Note. PhD = Doctor of Philosophy; PsyD = Doctor of Psychology.

Source. Commission on Accreditation, 5-Year Summary Report (APA, 2011).

FIGURE 3.13

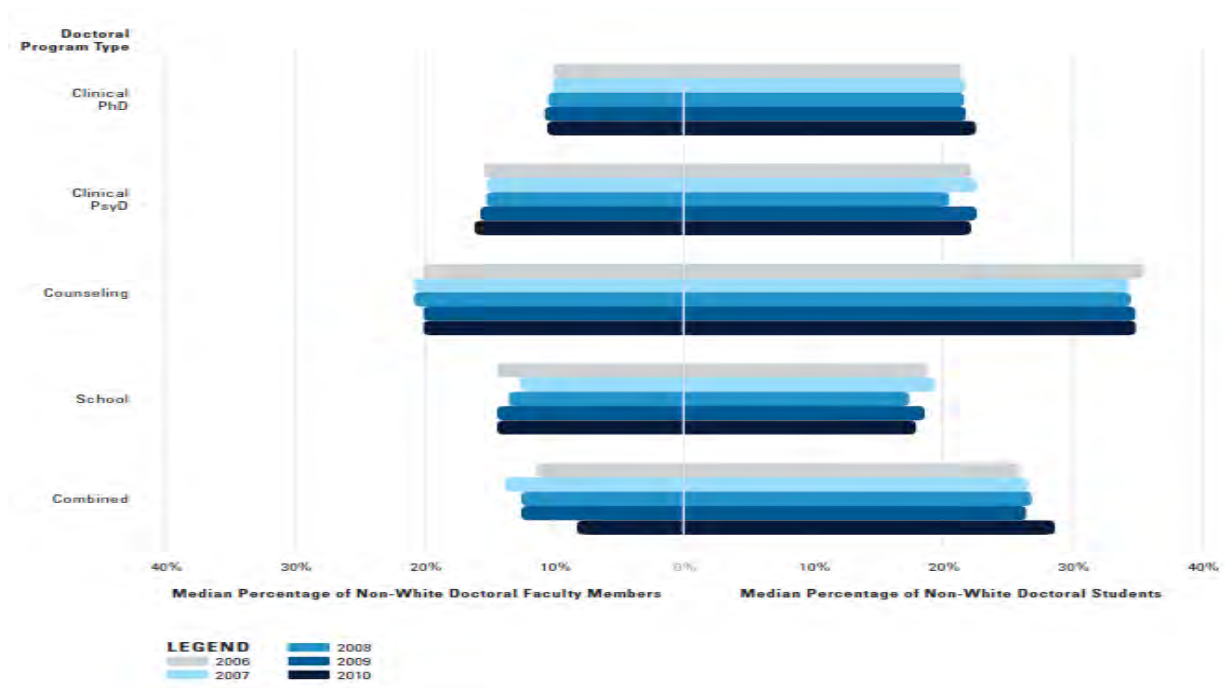
Median Percentage of Female Supervisors and Female Interns



Source. Commission on Accreditation, 5-Year Summary Report (APA, 2011).

FIGURE 3.14

Median Percentage of Faculty Members of Color and Students of Color by Program Type

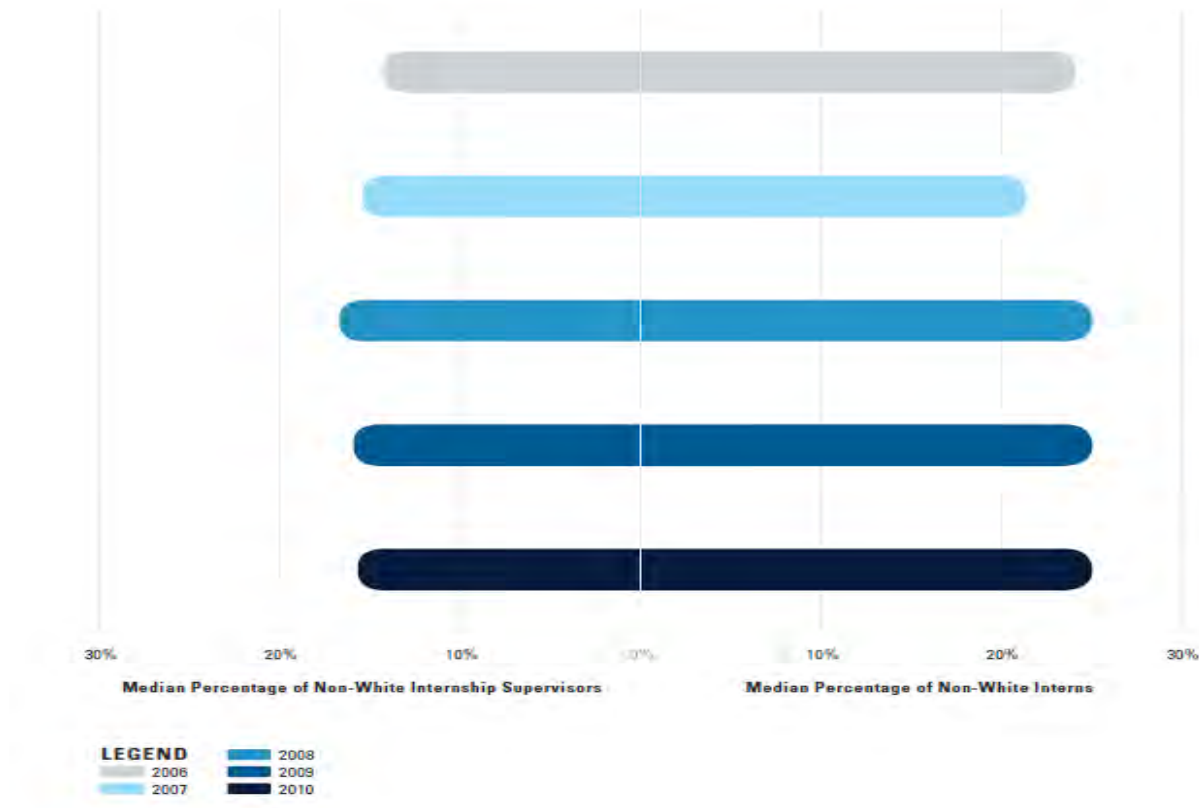


Note. PhD = Doctor of Philosophy; PsyD = Doctor of Psychology.

Source. Commission on Accreditation, 5-Year Summary Report (APA, 2011).

FIGURE 3.15

Median Percentage of Supervisors and Interns of Color



Source. Commission on Accreditation, 5-Year Summary Report (APA, 2011).

Why do all these patterns related to graduate student experiences matter? Because this report attempts to identify factors that may lead to growth or decline in entry or attrition in the field of psychology over time, it thus becomes crucial to examine conditions in graduate study that may affect the overall robustness of the educational pipeline in the future. Variables such as accrued debt, access to child care, anticipation of job prospects, and availability of faculty and supervisors perceived to be similar to oneself constitute conditions that may be influential. However, there are many other factors in the educational experience that affect women but could not be ascertained for this report, and given the well-documented, long-standing patterns of gender discrimination in education (Fassinger, 2005, 2008; Hill, Corbett, & St. Rose, 2010), such factors are worth exploring to see whether they are present in the psychology education pipeline.

A brief digression might illuminate the importance of investigating some of the factors thought to determine women's educational experiences. As but one example, the data above from health service provider-related programs indicate gaps between numbers of women (and racial/ethnic minority) students and numbers of women (and racial/ethnic minority) faculty and supervisors—which is important because these individuals often serve as mentors for students not only during education and training but throughout their careers. Mentoring has been documented as an important variable in students' professional development and in career advancement in the workplace; indeed, in 2009, recent special sections of *Professional Psychology: Research and Practice* were devoted to mentoring in psychology. Overall, a substantial body of research suggests import-

ant benefits for mentees across many kinds of settings and mentorship pairings, but psychology students in clinical programs (especially PsyD programs) appear to receive less mentoring than those in research-oriented programs (Williams-Nickelson, 2009). Moreover, research documents difficulties for women, particularly racial/ethnic minority women, in accessing and benefiting fully from mentoring relationships, especially in sponsorship or the instrumental aspects of mentoring that are most directly linked to career progress (Allen, Eby, Poteet, Lentz, & Lima, 2004; Carter & Silva, 2010; Clark, Harden, & Johnson, 2000; Ibarra, Carter, & Silva, 2010; Noy & Ray, 2012; O'Brien, Biga, Kessler, & Allen, 2010; Williams-Nickelson, 2009). Finally, research shows that many people prefer that their mentors or mentees are similar to them in status characteristics, such as gender and race/ethnicity, and that they experience satisfaction and support from such relationships (Blake-Beard, Bayne, Crosby, & Muller, 2011; Scandura & Williams, 2001). Overall, then, it would seem that women may be at a particular disadvantage in the educational pipeline in terms of mentoring based on both their gender and their predominance in clinical program enrollments, and that men and women who are racial/ethnic minorities, sexual minorities, transgender or having a gender nonconforming identity, or disabled have additional disadvantages due to the lack of having individuals like them to mentor them.

Given the data above, it is clear that there are not enough women faculty, and especially women of color, in graduate training programs to allow for matched mentorship for all those who might want it, leaving many women to be mentored by White men in the foreseeable future. Fortunately, the research indicates that successful outcomes can and do occur when mentoring relationships are not matched by gender or race (e.g., Blake-Beard et al., 2011). Moreover, recent studies suggest that male mentors tend to provide more career or instrumental mentoring, whereas women focus more on psychosocial support (e.g., O'Brien et al., 2010). Given a persistent gender advancement gap that has failed to be closed by mentoring, thought to result from insufficient career or instrumental mentorship for women (Carter & Silva, 2010; Ibarra et al., 2010), it might be the case that matched mentoring results in women feeling support from a similar other but not actually progressing because the mentor lacks power and status in the organization to advocate successfully for the mentee. Thus, because White men continue to occupy most of the positions of power in organizational hierarchies, they are well placed to provide the kind of sponsorship and career mentoring that women need. A recent study of White intern supervisors (Gloria, Hird, & Tao, 2008) found that their own multicultural competence was related to experience with larger numbers of diverse supervisees over time, suggesting that as more and more mentoring occurs across gender and racial/ethnic differences, mentoring relationships of all kinds may become increasingly successful and beneficial to both parties. This brief discussion of mentoring provides an example of an issue of documented importance in education and training for women that can be explicated and addressed through careful examination of available data, including the research literature, and that also can be interrogated more fully in future data collection efforts.

Summary

The 1995 report demonstrated how the dramatic influx of women into psychology in the 1970s and 1980s was connected to increased access to education and training for women at all levels of the higher education system, beginning with baccalaureate degrees and continuing through the doctorate, establishing a pipeline from education to entry into the field. It was anticipated that if trends persisted in the predominance of women in the higher education pipeline, women would continue to command the vast majority of the doctoral degrees in psychology across most subfields. Moreover, the explosion of opportunity in the health arena was judged in all likelihood to continue, thereby composing the largest bubble in the educational pipeline.

The current data regarding education and training of psychologists suggest that, overall, much of the growth in psychology graduate education continues to be due to the influx of women, including (and in some cases,

particularly) racial/ethnic minority women. In terms of doctoral degree attainment, the health service provider subfields have continued their explosive growth, with most of the awarded degrees located in those subfields. The numbers of doctoral degrees awarded to women have increased across all psychology subfields (especially clinical psychology), except in the “hard” science subfield encompassing experimental, physiological, and comparative psychology, which remains dominated by (decreasing numbers of) men.

Most health service provider–related programs are composed of women students (about 72%–82% of students overall), and new graduates appear to believe the job market in psychology to be slightly better than fair (but not “good”). Most in health service provider tracks find work in medical and educational settings, independent clinical practice, and community mental health and counseling centers. Educational costs and debt appear to disadvantage women, older graduates, racial/ethnic minorities, and those in professional degree (PsyD) programs. Starting salaries do not appear to mitigate the larger financial burden of obtaining a professional degree for PsyD graduates.

Given that most students in the educational pipeline are women—with increasing numbers of racial/ethnic minority women—and that most of the growth in the field of psychology is in health service provider subfields, it is reasonable to conclude that the majority of the psychology workforce currently and in the foreseeable future is/will be composed of women working in health service provider roles and settings. Moreover, given the data on student debt and starting positions and salaries, it is reasonable to expect that many of them will graduate with substantial debt that is not balanced by high salaries, at least not initially. What happens to these women in the workplace over time should be of great interest because they are the psychology workforce of today and the future.

Finally, there are well-documented gender differences in actual educational experiences that are known to disadvantage women, although the presence or potential impact of such differences in psychology are not known at this time. Mentoring was discussed briefly here as a variable of importance, but there are a host of other well-documented barriers to women’s education that bear examination for female students in the psychology pipeline, including classroom experiences, microaggressions and harassment, mathematics performance, career aspirations, and educational climate. These could not be addressed in this report due to lack of data, suggesting the need for more targeted data collection efforts in preparing for future workforce analyses.

APPENDIX B contains additional details for Chapter 3 (see <http://www.apa.org/women/programs/gender-composition/index.aspx>).

4 EMPLOYMENT OF PSYCHOLOGISTS

The 1995 report documented considerable inequities for women psychologists relative to their male peers in terms of compensation, work status, employment settings, recognition, advancement, and leadership. The concern expressed in the 1995 report was that the increasing numbers of women in psychology could depreciate the field's prestige and power. It is a well-documented trend that appears to hold true in many professional fields that in addition to experiencing an increase in women, there is a decrease in numbers of men, particularly White men. Such a scenario could compromise the long-term vitality of the profession.

This chapter presents data regarding the employment of psychologists and examines the various aspects of employment noted in the earlier report (e.g., settings, salaries, advancement). In addition, this chapter specifically explores academic and health service provider settings. The status of women is explored throughout each of these areas. Moreover, concerns about the negative effects of increasing women alongside decreasing men in the field, noted in the 1995 report, are revisited with new data.

Primary Employment Settings and Work Activities

Workforce patterns of occupational segregation for women are well-documented (e.g., Carter & Silva, 2010; Hill et al., 2010; National Academy of Sciences, 2006) and generally point to the concentration of women in employment settings and activities that ensure social reproduction (e.g., education and health services roles) rather than the material production or profit-oriented (e.g., managerial, manufacturing, and entrepreneurial) roles more typically assumed by men (Hegewisch & Hartmann, 2014; Richardson, 2012). Nonetheless, it is notable that, globally, women's entrepreneurship has increased substantially in recent years (Kelley, Brush, Greene, & Litovsky, 2013). The 1995 report noted indications of similar gender inequities in psychology, such as the higher representation of women than men faculty in 2-year colleges and in nontenure track appointments in academic institutions, and it urged continued monitoring of parity in settings and work activities of psychologists.

Table 4.1 shows the employment settings and work activities of psychologists (those with doctoral degrees employed part-time or full-time) for three benchmark years: 1993, 2001, and 2010 (from data collected by the National Science Foundation [NSF]). This table exhibits the same patterns found in data presented previously, in that numbers of men have remained fairly stable, whereas numbers of women have risen dramatically overall across settings and work activities. However, in these data, it is possible to explore whether the influx of women is reflected equally across all settings and activities or whether historical patterns of occupational segregation still exist. Analyses (chi-square tests) indicated a significant relationship between gender and employment setting in each year. In 1993 and 2001, significantly more men (about 12%) than women (about 9%) worked in government, whereas in 1993, more women (about 52%) than men (50%) worked in business/industry (which includes the business of independent practice); furthermore, in 2010, more women (7%) than men (5%) worked in 2-year colleges. Tests also revealed gendered effects in primary work activity in each year, which were consistent across time. In all three benchmark comparison years, there were significantly more men (17%) than women (9%) working in research and management and more women than men working in teaching (17% women vs. 16% men) and in professional services (49% women vs. 44% men). These patterns replicate the long-standing overrepresentation of men in scientific and managerial roles and women in teaching and service roles documented in the literature (e.g., Carter & Silva, 2010; Hill et al., 2010; National Academy of Sciences, 2006).

TABLE 4.1

Employment Setting and Work Activities of Psychology PhDs by Gender: 1993, 2001, and 2010

Variable	Men			Women			Total			% of women in setting or work activity		
	1993	2001	2010	1993	2001	2010	1993	2001	2010	1993	2001	2010
Employment setting												
N	44,466	46,720	46,616	31,432	42,121	55,775	75,898	88,840	102,391			
2-year college, %	5.0	6.1	4.8	6.4	7.6	7.3	5.6	6.8	6.2	47.4	55.7	60.6
4-year college, %	33.0	32.7	32.9	32.4	34.0	33.7	32.7	33.3	33.3	41.0	50.9	50.6
Government, %	12.4	12.0	11.4	9.5	7.9	10.4	11.2	10.1	10.9	35.1	39.7	47.7
Business/industry, %	49.7	49.2	50.9	51.8	50.5	48.5	50.5	49.8	49.6	42.4	50.7	48.8
Primary work activity												
N	44,467	46,723	46,615	31,431	42,121	55,774	75,898	88,842	102,393			
Teaching, %	15.9	16.7	16.1	17.7	16.9	17.3	16.6	16.8	16.8	44.2	47.7	56.2
Research, %	15.7	16.6	17.5	11.9	14.4	15.7	14.1	15.5	16.5	34.8	43.9	51.7
Professional services, %	46.2	44.2	42.1	54.5	50.8	46.6	49.6	47.3	44.5	45.5	50.9	57.0
Management, %	12.6	11.2	13.9	7.7	8.4	10.4	10.6	9.9	12.0	30.2	40.6	47.2
Other activities, %	9.6	11.4	10.4	8.2	9.5	10.1	9.0	10.5	10.2	37.7	42.8	53.8

Note. Research includes basic and applied research. Other activities include categories such as accounting, employee relations, and sales. For 1993, this table includes those whose highest degree is a doctorate in psychology. These are two separate variables in the Integrated Survey Data for this year. For 2001 and 2010, this table includes those whose highest degree is in psychology. The Survey of Doctorate Recipients is restricted to those who hold doctorates. There are slight discrepancies in the *N*s for the gender and race/ethnicity tables due to missing values and differences in weighted counts (weighted counts were supplied by the NSF Scientists and Engineers Statistical Data System [SESTAT] data tool). PhD = Doctor of Philosophy.

Source. SESTAT, Integrated Survey Data for 1993 (NSF, n.d.-a) and Survey of Doctorate Recipients for 2001 and 2010 (NSF, n.d.-b).

To explore status variables that might affect the experiences of diverse psychologists, NSF data on the representation of members of racial/ethnic minority groups also were examined and tested. **Table 4.2** shows the distribution across employment settings and work activities for racial/ethnic minority psychologists. The increases in numbers across settings and activities overall are quite clear and consistent with data presented previously in this report. Results (chi-square tests), however, indicated a relationship between minority status and employment setting that persisted across years. In all three benchmark comparison years, more members of racial/ethnic minority groups (about 41%) than Whites (about 32%) worked in 4-year colleges, and more Whites (52%) than racial/ethnic minorities (38%) were located in business/industry. Results of testing also indicated a relationship between minority status and primary work activity in each year, and, again, patterns were consistent over time. A similar pattern observed for gender was present for racial/ethnic minorities, where long-standing occupational segregation of this population into education is a trend (see Guthrie's, 1976/2004, classic treatise).

In all three benchmark comparison years, there were significantly more men (17%) than women (9%) working in research and management and more women than men working in teaching (17% women vs. 16% men) and in professional services (49% women vs. 44% men). These patterns replicate the long-standing overrepresentation of men in scientific and managerial roles and women in teaching and service roles documented in the literature.

TABLE 4.2

Employment Setting and Work Activities of Psychology PhDs by Race/Ethnicity: 1993, 2001, and 2010

Variable	Minorities			White			Total			% of minorities in setting or work activity		
	1993	2001	2010	1993	2001	2010	1993	2001	2010	1993	2001	2010
Employment setting												
<i>N</i>	6,112	8,834	15,818	69,787	79,984	86,573	75,898	88,818	102,391			
2-year college, %	7.0	10.5	6.7	5.4	6.4	6.1	5.6	6.8	6.2	10.1	15.3	16.8
4-year college or medical institution, %	40.2	41.3	40.6	32.1	32.4	32.0	32.7	33.3	33.3	9.9	12.4	18.9
Government, %	15.3	10.6	13.8	10.8	10.0	10.4	11.2	10.1	10.9	11.0	10.5	19.5
Business/industry, %	37.6	37.6	38.9	51.7	51.2	51.6	50.5	49.9	49.6	6.0	7.5	12.1
Primary work activity												
<i>N</i>	6,113	8,833	15,817	69,786	79,985	86,572	75,899	88,818	102,389			
Teaching, %	20.0	19.0	17.8	16.3	16.6	16.6	16.6	16.8	16.8	9.7	11.2	16.4
Research, %	14.0	17.7	17.1	14.2	15.3	16.4	14.1	15.5	16.5	7.9	11.3	16.0
Professional services, %	40.1	42.0	38.6	50.4	47.9	45.6	49.6	47.3	44.5	6.5	8.8	13.4
Management, %	16.3	8.5	15.1	10.1	10.0	11.4	10.6	9.9	12.0	12.4	8.6	19.5
Other activities, %	9.6	12.8	11.5	9.0	10.2	10.0	9.0	10.5	10.2	8.5	12.2	17.3

Note. This table includes those whose highest degrees are doctorates in psychology and are employed (full-time or part-time). The Minorities category includes Asian and underrepresented minorities. Research includes basic and applied research. Other activities include such categories as accounting, employee relations, and sales. For 1993, this table includes those whose highest degree is a doctorate in psychology. These are two separate variables in the Integrated Survey Data for this year. For 2001 and 2010, this table includes those whose highest degree is in psychology. The Survey of Doctorate Recipients is restricted to those who hold doctorates. There are slight discrepancies in the *Ns* for the gender and race/ethnicity tables due to missing values and differences in weighted counts (weighted counts were supplied by the NSF Scientists and Engineers Statistical Data System [SESTAT] data tool). PhD = Doctor of Philosophy.

Source. SESTAT, Integrated Survey Data for 1993 (NSF, n.d.-a) and Survey of Doctorate Recipients for 2001 and 2010 (NSF, n.d.-b).

Taken together, these data (as captured in NSF databases) seem to indicate that women are funneled into educational settings and service activities. This pattern repeats long-standing patterns of occupational segregation documented consistently in the literature on women in the workplace (Hegewisch & Hartmann, 2014) and suggests that the situation in psychology is similar to that in the larger society. What cannot be understood from these data are the factors that lead to the presence of more women into particular sectors and settings. For example, research indicates that men more often than women express preferences for prestigious jobs that involve challenging work, influence over others, responsibility and risk-taking, and opportunities for personal achievement and advancement. However, women tend to favor jobs that enable them to develop skills and abilities, focus on helping others, and allow them to spend time with families (Weisgram, Dinella, & Fulcher, 2011). There also is evidence (Barsh & Yee, 2012) that many women aspire to some degree of advancement (69% of entry- and midlevel female employees relative to 74% of their male counterparts) but typically not to top levels of leadership (18% of women compared to 36% of men) in their work settings. It is unclear whether such differences occur exclusively in the psychology workforce, suggesting the need for targeted data collection aimed at clarifying observed patterns in future workforce analyses.

Employment Status

Differences in employment status in terms of full-time (≥ 35 hr per week) versus part-time (< 35 hr per week) employment lead to significant differences in earnings, advancement, as well as other achievement-related factors, and the chronic “underemployment” of women has been well-documented (e.g., Bertrand, Goldin, & Katz, 2010; Galinsky et al., 2011; Goldin & Katz, 2008). Thus, it is important to explore whether there are systematic differences in the extent to which full-time and part-time employment characterize the work patterns of women and men within psychology and to determine the conditions associated with these patterns.

Table 4.3 shows the overall employment status of men and women in psychology captured in NSF data for two benchmark years: 1993 and 2003 (2003 is the most recent year available for this constellation of variables). Review of the data suggests similarities between men’s and women’s employment in the psychology workforce during both comparison years. In 1993, there were fractionally (1%) more women than men in the workforce and fractionally (1%) more men than women out of the workforce. This pattern was reversed in 2003. Additional data in the tables that follow provide some illumination on this and other components of workforce participation.

TABLE 4.3

Counts by Gender and Percentage Within Gender of Overall Psychologist Employment: 1993 and 2003

Variable	1993			2003		
	Men	Women	Total	Men	Women	Total
	<i>n</i> (%)	<i>n</i> (%)	<i>N</i>	<i>n</i> (%)	<i>n</i> (%)	<i>N</i>
Employed	44,466 (92)	31,432 (93)	75,898	47,732 (90)	48,732 (89)	96,464
Unemployed	677 (1)	313 (1)	990	922 (2)	891 (2)	1,813
Not in labor force	3,451 (7)	2,019 (6)	5,470	4,534 (9)	5,302 (10)	9,836
Total	48,594	33,764	82,358	53,188	54,925	108,113

Note. The Integrated Survey Data were filtered for those whose highest degree was a doctorate in psychology. The most recent Integrated Survey Data file containing the employment status variable was from 2003. The employment status variable was not available in the Survey of Doctorate Recipients: 1993, $\chi^2(2) = 79.2$, $p < .001$; 2003, $\chi^2(2) = 48.0$, $p < .001$.

Source. Scientists and Engineers Statistical Data System (SESTAT), Integrated Survey Data for 1993 and 2003 (NSF, n.d.-a).

Further examination of available data regarding part-time or full-time employment status for these two comparison years of the NSF data (APA Center for Workforce Studies, 2015) indicates that approximately 37% of full-time employed psychologists were women in 1993, and 46% were women in 2003; 69% and 67% of part-time employed psychologists were women in 1993 and 2003, respectively, suggesting a rise in full-time employment and relative stability of the high rates of part-time employment for women over these decades. These numbers also suggest that the influx of women into the psychology workforce was largely accommodated during this time period.

Table 4.4 shows the actual counts of part-time and full-time employment status of male and female psychologists and the percentage within gender of full-time employment status (again, based on NSF data). In 1993, about 79% of women and 93% of men were employed full-time, whereas in 2003, 70% of women and 85% of men were employed full-time. Combined with the increases in part-time employment numbers shown in the table, these data suggest some degree of shift from full-time employment to part-time employment for both women and men during this time period. Analyses (i.e., chi-square tests) of these patterns, however, indicate a strong link between gender and employment status: For both benchmark comparison years, women were significantly more likely than men to be employed part-time. The trend in psychology mirrors the overall sharp increase in part-time work observed nationwide since 1988 (Tilly, 1990). The common explanation for such a shift is that part-time work increases during economic recessions and decreases during expansions. The sustained trend of a continued increase in part-time work in the general workforce, however, may also be attributable to other factors. For instance, the trade and service industries have increasingly relied on low wages, low skills, and high turnover rates to cut operation costs. How these factors observed in the trade and service industry may also be present in the psychology workforce is an important area for future research.

TABLE 4.4

Counts by Gender of Full-Time and Part-Time Psychologist Employment and Percentage Within Gender (Rounded) of Full-Time Psychologist Employment

Variable	1993			2003		
	Women	Men	Total	Women	Men	Total
	<i>n</i> (%)	<i>n</i> (%)	<i>N</i>	<i>n</i> (%)	<i>n</i> (%)	<i>N</i>
Full-time	24,689 (79)	41,378 (93)	66,067	34,290 (70)	40,535 (85)	74,825
Part-time	6,743	3,089	9,832	14,442	7,197	21,639
Total	31,432	44,467	75,899	48,732	47,732	96,464

Note. This table includes those who were employed only: 1993, men: $\chi^2(3) = 740.4$, $p < .001$; 1993, women: $\chi^2(3) = 1,377.2$, $p < .001$; 2003, men: $\chi^2(3) = 1,722.6$, $p < .001$; 2003, women: $\chi^2(3) = 3,439.2$, $p < .001$.

Source. Scientists and Engineers Statistical Data System (SESTAT), Integrated Survey Data for 1993 and 2003 (NSF, n.d.-a).

It is important to explore whether some settings exhibit greater patterns of part-time employment for women than do others, given the apparent gender-related occupational segregation noted previously. **Tables 4.5 and 4.6** show the actual counts and percentage within gender (rounded) of men and women in employment settings and work activities for the two benchmark comparison years (1993, 2003) of NSF data. Table 4.5 appears to reflect the general shift from full-time to part-time employment (noted above) for both men and women during this time period. Analyses (i.e., chi-square tests) of the data, however, show significant relationships between full-time/part-time work status and employment setting. Results indicate that in 1993, men were more likely to be employed part-time in business/industry and full-time in all other work settings. Women in 1993 were more likely to be employed full-time in 4-year colleges or medical institutions, followed by 2-year colleges and government, and, like men, more likely to work part-time in business/industry. In 2003, men were more likely to be employed full-time in 4-year colleges or medical institutions and government, and part-time in 2-year colleges and business/industry. Women in 2003 were similar to men in that they were more likely to work full-time in 4-year colleges or medical institutions and government, followed by 2-year colleges, and work part-time in business/industry. In terms of settings, men and women during this time period exhibited similar patterns in that part-time work seemed to occur predominantly in business/industry and most full-time employment appeared to be in academia and government.

Table 4.6 shows the counts and percentage within gender for full-time/part-time work status by work activity. Again, analyses (i.e., chi-square tests) found a link between work activity and employment status for both men and women. In 1993, men were more likely to be employed full-time in management, followed by teaching and research, and employed part-time in professional services and other activities. In 1993, like men, women were more likely to be employed full-time in management, followed by other activities and teaching, and employed part-time in professional services. In 2003, men were more likely to be employed full-time in research, followed by management, and part-time in other activities, followed by professional services and teaching. Women in 2003 were more likely to be employed full-time in management, followed by research, and part-time in professional services, followed by teaching and other activities. The work activities of men and women appear to be fairly similar during this time period, with management and research dominating full-time employment.

TABLE 4.5

Counts by Gender and Percentage Within Gender (Rounded) of Full-Time (FT)/Part-Time (PT) Status in Psychology Employment Settings: 1993 and 2003

Variable		1993						2003					
		Men		Women		Total		Men		Women		Total	
		FT	PT	FT	PT	FT	PT	FT	PT	FT	PT	FT	PT
2-year college	N	2,133	84	1,617	382	3,750	466	2,276	631	2,817	1,114	5,093	1,745
	%	96	4	81	19			79	22	72	28		
4-year college or medical institution	N	14,045	609	9,169	1,020	23,214	1,629	15,607	1,390	14,126	2,813	29,733	4,203
	%	96	4	90	10			92	8	83	17		
Government	N	5,365	140	2,380	595	7,745	735	4,823	337	3,055	456	7,878	793
	%	98	3	80	20			94	7	87	13		
Business/industry	N	19,834	2,256	11,523	4,746	31,357	7,002	17,829	4,840	14,292	10,058	32,121	14,898
	%	90	10	71	29			79	21	59	41		
Total	N	41,378	3,089	24,689	6,743	66,067	9,832	40,535	7,197	34,290	14,442	74,825	21,639

Note. This table includes those who were employed only: 1993, men: $\chi^2(3) = 740.4, p < .001$; 1993, women: $\chi^2(3) = 1,377.2, p < .001$; 2003, men: $\chi^2(3) = 1,722.6, p < .001$; 2003, women: $\chi^2(3) = 3,439.2, p < .001$.

Source. Scientists and Engineers Statistical Data System (SESTAT), Integrated Survey Data for 1993 and 2003 (NSF, n.d.-a).

TABLE 4.6

Counts by Gender and Percentage Within Gender (Rounded) of Full-Time (FT)/Part-Time (PT) Status in Work Activities: 1993 and 2003

Variable		1993						2003					
		Men			Women			Men			Women		
		FT	PT	Total	FT	PT	Total	FT	PT	Total	FT	PT	Total
Teaching	N	6,655	398		4,855	722	11,510	6,559	1,403	1,120	6,530	1,993	13,089
	%	94	6		87	13		82	18		77	23	
Research	N	6,634	368		3,209	523	9,843	8,742	513	891	6,512	959	15,254
	%	95	5		86	14		95	6		87	13	
Professional services	N	18,680	1,847		12,012	5,104	30,692	16,055	3,896	6,951	13,407	9,978	29,462
	%	91	9		70	30		81	20		57	43	
Management	N	5,517	98		2,297	130	7,814	5,292	422	228	4,519	589	9,811
	%	98	2		95	5		93	7		89	12	
Other activities	N	3,892	376		2,317	263	6,209	3,886	962	639	3,325	923	7,211
	%	91	10		90	10		80	20		78	22	
Total	N	41,378	3,087		24,690	6,742	66,068	40,534	7,196	9,829	34,293	14,442	74,827
													21,638

Note. This table includes those who were employed only: 1993, men: $\chi^2(4) = 441.3$, $p < .001$; 1993, women: $\chi^2(4) = 1,640.7$, $p < .001$; 2003, men: $\chi^2(4) = 1,356.0$, $p < .001$; 2003, women: $\chi^2(4) = 4,006.1$, $p < .001$.

Source. Scientists and Engineers Statistical Data System (SESTAT), Integrated Survey Data for 1993 and 2003 (NSF, n.d.-a).

These data suggest that there are similarities between women and men in the kinds of employment settings and work activities in which full-time versus part-time employment occur, and this may be a function of the settings and work activities themselves. That is, it may be more difficult to address all the tasks required of a management position (e.g., program development, quality assurance, team building) in a part-time job, whereas professional services (e.g., therapy, consulting) are more flexible to accommodate in a part-time work schedule. What is perhaps more compelling in these data is that, overall, women exhibit a greater likelihood than men of being employed part-time, and their within-gender percentages of part-time employment exceed men's in every employment setting and work activity (some by more than twice the percentage of men's part-time status). Finally, another important issue identified in analyses of the U.S. labor force is that in addition to women, minorities are disproportionately stuck in part-time jobs with stunted career paths (Tilly, 1990). Important to pursue are data collection and research that identify how this trend might also be affecting minorities of all genders in the psychology workforce. Currently, the APA CWS only has such information available in the aggregate. Data that could reveal how these trends affect White women, women of color, and men of color in comparison to White men would be very helpful to understand the underpinnings of the problem.

Overall, these work status patterns for psychologists are consistent with current analyses of the overall U.S. workforce (Galinsky et al., 2011), indicating that women's and men's patterns of full-time work have been converging over time, with decreasing numbers of men and increasing numbers of women working full-time. However, substantial numbers of women continue to work part-time, and women's consistent predominance in part-time work has been an ongoing concern in the earnings gap between men and women (Rose & Hartmann, 2004), addressed later in this chapter.

Factors Associated With Work Status

As it appears that women psychologists tend to be overrepresented (relative to men) in part-time employment, this section explores influences on full-time/part-time work status. **Table 4.7** presents results of a statistical analysis showing variables found to be significantly associated with part-time work status for female and male psychologists (using current American Community Survey [ACS] data; APA CWS, 2015). As the table shows, female psychologists engage in market work an average of 7 hr less per week than their male counterparts, and a greater percentage of them (about 37%) are employed part-time than are men (13%). Education level indicates greater numbers of women with master's and professional degrees than men, who tend to have Doctor of Philosophy (PhD) degrees. More men are married than women, but women show a greater tendency to have young children. Income also is a factor because female psychologists are more likely than their male peers to report household income that reflects an earner with income greater than theirs. Women are more likely than men to be in primary and secondary education, in local government agencies, and self-employed (presumably in independent practice).

TABLE 4.7

Variables Contributing Significantly to Psychologist Part-Time Work Status

Variable	Male psychologists, %	Female psychologists, %
Hours worked per week, <i>M</i>	41.7	34.61
Part-time	13.18	36.48
Doctorate	61.43	41.67
Professional	5.02	6.85
Master's	33.55	51.49
Married	76.44	66.19
Age, <i>M</i>	50.72	48.32
Semi-retired	4.09	4.96
Retired	6.40	5.40
Three or more children	7.11	5.80
Small children (< 5 years)	11.78	15.18
Older children (5–17 years)	37.04	33.05
Family income less earned income (2012 per \$1,000), <i>M</i>	72.42	109.77
Other household income greater than \$200,000 (2012 per \$1,000)	3.24	10.58
Primary and secondary education	16.93	22.54
Private research	4.17	2.73
Other industry	9.59	4.98
Government	33.85	29.53
Local government	14.99	17.86
State government	14.11	9.67
Federal government	4.75	1.99
Self-employed	37.49	40.80

Note. Age is restricted to be between 30 and 65 years. The sample includes the retired and semi-retired. The definition of *retired* was a person more than 60 years of age and out of the labor force. Semi-retired was defined as being more than 55 years of age and in one of two conditions: The person works (a) less than 40 hr a week or (b) less than 20 hr a week normally. The sample is approximately 3,982 for men and 7,373 for women. Money is deflated to constant 2011 dollars using the Consumer Price Index—All Urban Consumers Index.

Source. American Community Survey (U.S. Census Bureau, n.d.); APA Center for Workforce Studies, unpublished analysis (2014).

Table 4.8 presents variables that may further illuminate the part-time work status of women. It is based on the American Time Use Study (Aguiar, Hurst, & Karabarbounis, 2013) and categorizes weekly time use according to market work (one’s paid job) and other activities, such as leisure. CWS analyses compared psychologists to others in similar professional occupations, found them to be comparable, and collapsed them into an overall “comparables” group that could be compared to all U.S. workers by gender (thereby producing a larger, more robust sample and reducing standard errors for significance tests).

As Table 4.8 shows, professional women (including psychologists) engage in market work an average of 10 hr less per week than do professional men. The variables found to be most significant in contributing to time use differences (based on the “comparables” data) are being a woman, being married, and having children. Being a woman increases one’s time spent on most of the nonmarket work categories such as taking care of the home and children, which is very consistent with a large literature documenting the responsibility of housework and family care falling primarily on women (e.g., Galinsky et al., 2011). Moreover, these data show that having children is the variable that exerts the most effect on time use, from added time spent on household and child care work to decreased time spent in leisure activities and in market work. Marriage also seems to result in more household and child care attention (for both men and women), presumably because marriage often is associated with parenthood. **Figure 4.1** is a graphic representation of these data.

Overall, these data suggest that psychologists exhibit similar patterns to other workers in that women are more likely than men to be employed part-time (and perhaps “underemployed” relative to their education, experience, and aspirations) and to be employed in the kinds of settings that facilitate part-time engagement in work—for example, self-employed or in institutions likely to have family-supportive policies or structures in place (e.g., academe, government; see Dolcos & Daley, 2009). Gender (being a woman), marriage, and children contribute most significantly to time use, with women spending significantly more time than their male peers in household and child care work and less time in market work and leisure. Income variables suggest that a woman is more likely than a man to have an earner in the household whose wages exceed hers, and she is less likely than her male peer to possess a doctorate degree.

Professional women (including psychologists) engage in market work an average of 10 hr less per week than do professional men. The variables found to be most significant in contributing to time use differences (based on the “comparables” data) are being a woman, being married, and having children.

TABLE 4.8

Time Use Analysis Comparison Between Psychologists and Other U.S. Workers: 2003–2013

Subsample	U.S. workers, hours per week			Comparables (including psychologists), hours per week				Significant contributors to hours per week (based on comparables)		
	All	Men	Women	All	Men	Women	Men–women differences	Women	Married	Have children
Market work	33.89	40.20	27.58	40.78	46.87	36.77	10.10	□7.91		□4.48
Other income-generating activities	0.18	0.17	0.20	0.15	0.05	0.21	□0.17			0.29
Job search	0.31	0.40	0.22	0.17	0.11	0.00	0.11			
Nonmarket work	19.00	14.64	23.36	18.02	13.77	20.81	□7.04	5.68	2.53	
Core home production	10.23	6.05	14.40	9.11	5.40	11.54	□6.13	5.62		1.39
Home ownership activities	2.44	3.31	1.58	1.98	2.59	1.58	1.01	□1.58		
Obtaining goods and services	5.03	4.03	6.03	5.68	4.51	6.45	□1.94	1.82		
Child care	4.95	3.33	6.57	6.96	4.81	8.38	□3.57	3.76	2.31	10.20
Others care	1.30	1.24	1.36	1.25	1.27	1.24	0.03		0.73	□0.92
Leisure	105.68	106.02	105.34	98.17	99.26	97.46	1.80			□6.73
TV watching	17.55	19.31	15.79	11.56	13.02	10.60	2.42	□3.01		□2.24
Socializing	6.72	6.11	7.33	6.37	5.85	6.71	□0.86	1.27		
Sleeping	58.66	57.83	59.49	56.00	55.19	56.54	□1.35			
Eating and personal care	13.29	12.94	13.65	14.31	14.62	14.10	0.52			□1.22
Own medical care	1.07	0.85	1.28	0.45	0.27	0.57	□0.30			
Other leisure	9.46	9.83	9.09	9.93	10.57	9.51	1.07			□2.31
Other	3.99	3.25	4.72	3.76	3.13	4.17	□1.03			
Education	0.80	0.58	1.01	0.94	0.55	1.20	□0.65			
Civic and religious activities	2.12	1.82	2.43	2.36	2.31	2.39	□0.09			1.09
N	68,832	31,377	37,455	2,667	982	1,685	□703	2,667	2,667	2,667

(continued on next page)

Table 4.8 (continued)

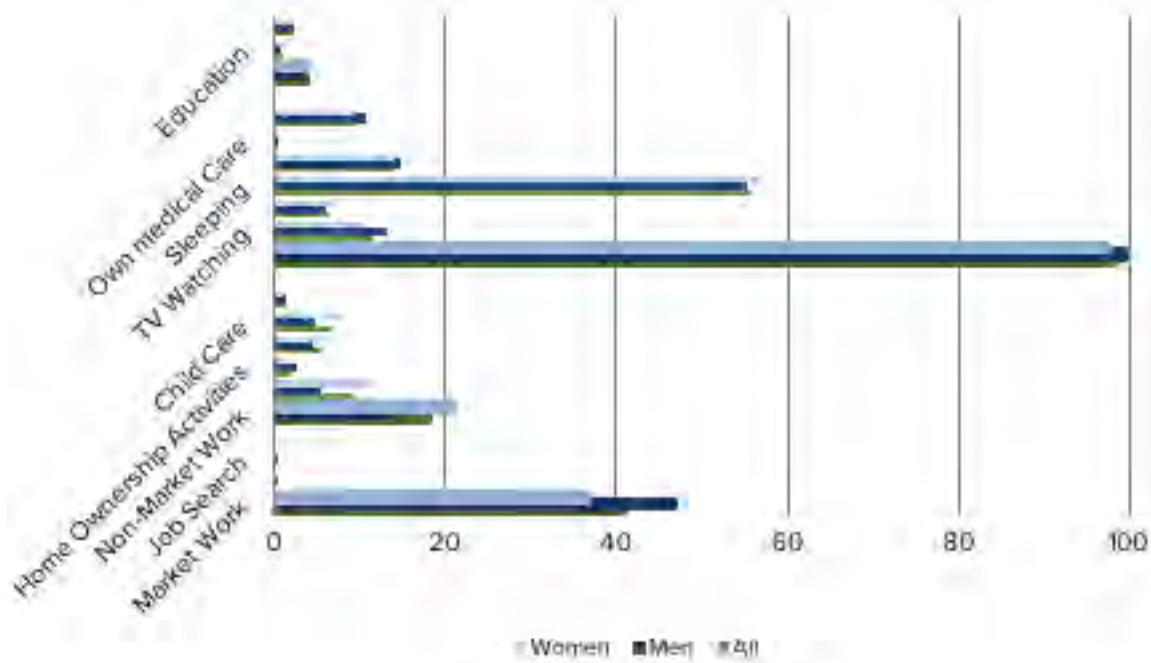
Note. Data are from the American Time Use Survey from 2003 to 2012. The time use categories were aggregated by Aguiar et al. (2013). The codes that were used were adjusted. The samples are restricted to workers between 30 and 60 years of age. Comparables were identified with occupation, industry, and education codes in the American Time Use Survey. The comparable occupations are lawyers, physicians, dentists, pharmacists, nurses, physiotherapists, occupational therapists, counselors, and social workers. Education is restricted to those with a bachelor’s degree or higher. “All U.S. workers” is a simple regression against a constant. The comparables regression includes psychologists and is a simple regression against a constant. Psychologists are tested as being different by using dummy variables (results not shown). They were not significantly different. The conditional marginal effects include all psychologists and comparable professions. The model is conditioned on gender, age brackets (in 10-year segments), race, marriage status, existence of children, and education. All regressions are weighted by Aguiar et al.’s weight for regional sampling. Marginal effects that were insignificant are reported as zero. Significance levels are recorded at the .05 level.

Source. Bureau of Labor Statistics, American Time Use Survey (2003–2012).

Overall, these data suggest that psychologists exhibit similar patterns to other workers in that women are more likely than men to be employed part-time (and perhaps “underemployed” relative to their education, experience, and aspirations) and to be employed in the kinds of settings that facilitate part-time engagement in work.

FIGURE 4.1

Hours Spent per Week: Psychologists and Other Comparable Items by Gender



Note. Data are from the American Time Use Survey from 2003 to 2012. The time use categories were aggregated by Aguiar et al. (2013). The codes that were used were adjusted. The samples are restricted to workers between 30 and 60 years of age. Comparables were identified with occupation, industry, and education codes in the American Time Use Survey. The comparable occupations are lawyers, physicians, dentists, pharmacists, nurses, physiotherapists, occupational therapists, counselors, and social workers. Education is restricted to those with a bachelor's degree or higher. "All U.S. workers" is a simple regression against a constant. The comparables regression includes psychologists and is a simple regression against a constant. Psychologists are tested as being different by using dummy variables (results not shown). They were not significantly different. The conditional marginal effects include all psychologists and comparable professions. The model is conditioned on gender, age brackets (in 10-year segments), race, marriage status, existence of children, and education. All regressions are weighted by Aguiar et al.'s weight for regional sampling. Marginal effects that were insignificant are reported as zero. Significance levels are recorded at the .05 level.

Source. Bureau of Labor Statistics, American Time Use Survey (2003–2012).

There is much that remains unknown in these patterns, and the exact nature of the impact of marriage and motherhood on women psychologists' employment is unclear—are part-time employment and career interruptions deliberately chosen, or are they constrained by workplace realities and gender role expectations? Research indicates, for example, that marital status and motherhood fuel bias in hiring decisions and performance judgments, including salary allocations (Correll, Benard, & Paik, 2007; Heilman & Okimoto, 2008; Nadler & Kufahl, 2014). There is also a well-documented “motherhood penalty” for women and “marriage premium” for men, in that marriage and parenthood produce perceptions of distraction and lack of job commitment regarding women but confer perceptions of stability and job focus on men (e.g., Correll et al., 2007). Moreover, workplace structures and policies still remain largely unsupportive of integrating work and family (Galinsky et al., 2011). In addition, although gender role attitudes have changed dramatically over time, more women (81%) than men (68%) believe that employed women can be good mothers (Galinsky et al., 2011), only 30% of fathers report that they share equally in caregiving (Catalyst, 2014), and 66% of women report that they continue to shoulder most of the child care burden (Galinsky et al., 2011; also see Harrington, Van Deusen, Fraone, Eddy, & Haas, 2011). The data presented in this section suggest that these kinds of overall workplace patterns are very much at play within the psychology workforce as well, but existing databases provide inadequate information for addressing such questions in detail and suggest the need for more extensive data collection efforts in this area. Some important questions to research include: Are women and men psychologists working in part-time positions doing so deliberately and, if so, if are they content with the option? Do women in full-time positions feel more pressure than men to demote to part-time work when they have children? Do employers of psychologists with more generous benefits for men and women raising children have less worker migration to part-time positions?

Compensation

A long-standing wage gap between women and men in the U.S. workforce is well-documented, and projections indicate that parity will not occur until 2058 at current rates of change (Institute for Women's Policy Research, 2013). Data over the past two decades consistently have placed women's compensation at about 70%–77% of men's even when variables such as education, age, experience, and job sector are factored in, and wage gap reductions that do occur from time to time are primarily the result of declines in men's real earnings rather than increased real earnings for women (Institute for Women's Policy Research, 2013). Moreover, wage gaps exhibit the “motherhood penalty” for women and “marriage premium” for men noted above, with marriage and parenthood associated with depressed earnings for women but with greater earnings for men (Correll et al., 2007). In this section, compensation is examined to explore whether psychologists exhibit wage gaps and patterns similar to those found in the overall workforce.

71

Comparison of Psychology With Other Science and Engineering Fields

First, the field of psychology is compared with other science fields. **Table 4.9** shows the median salaries of recipients of doctoral degrees across all science and engineering fields as captured in NSF data. As the table indicates, salaries in psychology are lower than those in all other fields except the social sciences (where they are comparable), and the salaries of women lag behind men's salaries in psychology more than in any other field.

TABLE 4.9

Median Annual Salaries (in Dollars) of Employed Doctoral-Level Scientists and Engineers by Field of Doctorate and Gender: 1993 and 2010

Major field	Current/adjusted	1993			2010			Women's salaries as % of men's salaries	
		Men	Women	Total	Men	Women	Total	1993	2010
All science/engi- neering fields	Current	60,000	47,000	57,000	100,000	77,000	94,000	78.3	77.0
	Adjusted	96,730	75,771	91,893	106,834	82,262	100,424		
Psychology	Current	54,000	46,000	50,000	90,000	70,000	80,000	85.2	77.8
	Adjusted	87,057	74,159	80,608	96,150	74,784	85,467		
Physical sciences	Current	65,000	52,000	63,000	102,000	83,000	100,000	80.0	81.4
	Adjusted	104,790	83,832	101,566	108,970	88,672	106,834		
Computer and math science	Current	60,000	52,000	59,000	102,000	86,000	100,000	86.7	84.3
	Adjusted	96,730	83,832	95,117	108,970	91,877	106,834		
Engineering	Current	69,000	57,000	68,000	115,000	93,000	111,000	82.6	80.9
	Adjusted	111,239	91,893	109,627	122,859	99,355	118,585		
Life sciences	Current	58,000	45,000	54,000	96,000	75,000	88,000	77.6	78.1
	Adjusted	93,505	72,547	87,057	102,560	80,125	94,014		
Social sciences	Current	55,000	46,000	52,000	90,000	72,000	80,000	83.6	80.0
	Adjusted	88,669	74,159	83,832	96,150	76,920	85,467		

Note. Salaries are based on annual salary (public use variable). Salaries were reported in increments of 1,000. This table includes those whose highest degrees are doctorates and those who are employed (full-time and part-time). Adjusted salaries were converted to 2013 dollars using the Bureau of Labor Statistics Consumer Price Index Inflation Calculator (http://www.bls.gov/data/inflation_calculator.htm).

Source. Scientists and Engineers Statistical Data System (SESTAT), Integrated Survey Data for 1993 (NSF, n.d.-a) and Survey of Doctorate Recipients for 2010 (NSF, n.d.-b).

Tables 4.10 and 4.11 show the median salaries (unadjusted dollars) in psychology compared to other science fields judged to be most similar to psychology. The tables provide information about both gender and race/ethnicity (a salary table for bachelor's degree recipients can be found in Appendix C). As the data show, at both the master's degree and doctoral degree levels, psychology salaries lag behind those of other similar fields, and particularly so for women. At the doctoral level, where salaries diverge most, the average wage gap between men and women is almost \$20,000—a gap greater than in any other field except the social sciences (where the gap is slightly smaller). In terms of racial/ethnic minority earnings (data include women and men), Asians and Whites exhibit higher salaries than do Hispanics and African Americans at the master's level, and salaries are higher for Whites at the doctoral level. Overall, the data suggest that racial/ethnic minorities in psychology do not fare as well overall as men in compensation in science-related fields most similar to (and including) psychology. Currently, the National Science Foundation only has such information available in the aggregate. Data that could reveal how these trends affect White women, women of color, and men of color in comparison to White men would be very helpful to understand compensation differences across diverse groups.

Salaries in psychology are lower than those in all other fields except the social sciences (where they are comparable), and the salaries of women lag behind men's salaries in psychology more than in any other field.

TABLE 4.10

Median Salaries (in Dollars) of Employed Recent Master's Degree Recipients Across Fields: 2008

Field	All full-time employed	Gender		Race/ethnicity					
		Male	Female	American Indian or Alaska Native	Asian	Black or African American	Hispanic or Latino/a	White	Other
Biological sciences	48,000	48,000	48,000	D	49,000	53,000	36,000	47,000	64,000
Psychology	43,000	45,000	42,000	D	44,000	40,000	37,000	43,000	38,000
Social sciences	55,000	64,000	48,000	41,000	56,000	50,000	69,000	52,000	63,000
Health	64,000	75,000	60,000	D	67,000	59,000	63,000	64,000	54,000

Note. Median annual salaries are for the principal job and are rounded to the nearest \$1,000. American Indian or Alaska Native, Asian, Black or African American, and White are single race. Hispanic or Latino/a may be of any race. Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino/a ethnicity. Biological sciences include agricultural/food sciences, biochemistry/biophysics, cell/molecular biology, environmental life sciences, microbiology, zoology, and other biological sciences. Social sciences include economics, political sciences, sociology, and other social sciences. D = suppressed to avoid disclosure of confidential information.

Source. Scientists and Engineers Statistical Data System (SESTAT), Integrated Survey Data, Survey of Recent College Graduates, 2008 (NSF, n.d.-a).

TABLE 4.11

Median Salaries of Employed Recent Doctoral Degree Recipients Across Fields: 2010

Field	All full-time employed	Gender		Race/ethnicity					
		Male	Female	American Indian or Alaska Native	Asian	Black or African American	Hispanic or Latino/a	White	Other
Biological sciences	91,000	99,000	80,000	113,000	85,000	78,000	78,000	95,000	83,000
Psychology	86,000	98,000	80,000	83,000	75,000	79,000	79,000	89,000	81,000
Social sciences	90,000	96,000	80,000	63,000	94,000	80,000	77,000	90,000	74,000
Health	93,000	103,000	87,000	D	100,000	85,000	87,000	94,000	88,000

Note. Median annual salaries are for the principal job and are rounded to the nearest \$1,000. American Indian or Alaska Native, Asian, Black or African American, and White are single race. Hispanic or Latino/a may be of any race. Other race includes Native Hawaiian or Other Pacific Islander and persons reporting more than one race who are not of Hispanic or Latino/a ethnicity. Biological includes agricultural/food sciences, biochemistry/biophysics, cell/molecular biology, environmental life sciences, microbiology, zoology, and other biological sciences. Social sciences include economics, political sciences, sociology, and other social sciences. D = suppressed to avoid disclosure of confidential information.

Source. Scientists and Engineers Statistical Data System (SESTAT), Survey of Doctorate Recipients for 2010 (NSF, n.d.-b).

Comparison of Salaries Across Industries

The ACS data also provide a comparison of wage data by gender and race/ethnicity across broad industry groups or sectors in the U.S. workforce (the same groups presented in Chapter 2 documenting industry growth and change). Because these data are based on large samples, they can be useful in determining whether patterns observed in smaller data sets hold when larger populations are sampled (Appendix C contains additional data).

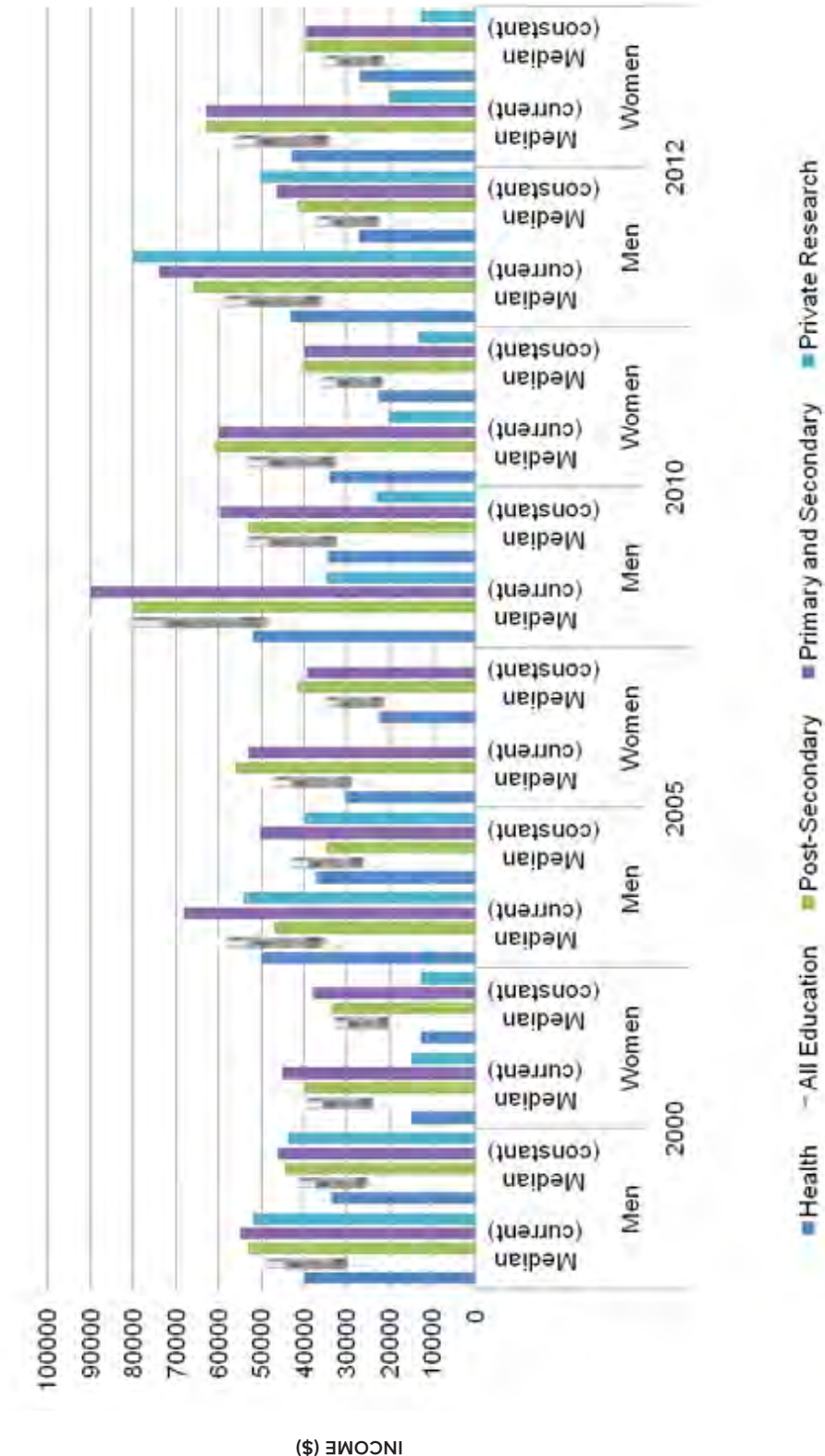
Figures 4.2 and 4.3 present a visual representation of the distribution of salaries (both in current dollars and adjusted for inflation) across U.S. industries over four benchmark years (2000, 2005, 2010, 2012) broken down by both gender and race/ethnicity. As the data in Figure 4.2 show, men's salaries exceed women's (in both current and adjusted dollars) in almost every industry group in every benchmark year; the only exception in a total of 96 data points (some data points are so low that they are not visible on the graph) is postsecondary education in 2005. Several of the gaps are especially notable—for example, in private research and in most of the education categories over time—but most particularly in primary and secondary education. A more detailed CWS analysis of the 2010 data (Christidis, Wicherski, Hamp, Stamm, & Nigrinis, 2014) translates these data into actual gender pay gaps: Approximate income differences favoring men in 2010 were \$16,000 in post-secondary education; \$19,000 in primary/secondary education and other; \$34,000 in private research; and \$40,000 in health services.

In Figure 4.3, which shows data for racial/ethnic groups (minority or nonminority/White), the gaps are a bit more variable (and subject to error given very low numbers in some of the racial/ethnic categories aggregated to produce these data). Across the 96 data points captured in the figure, members of racial/ethnic minority groups out-earned Whites in all but 12 areas: post-secondary education and other in 2000; health, private research, and other in 2005; all industries except health in 2010; and primary and secondary education and private research in 2012. Thus, it would seem that members of racial/ethnic minority groups might fare reasonably well in compensation in some sectors of the overall economy. As noted earlier, the ethnic minority category includes men, women, and persons belonging to multiple racial and ethnic groups. Therefore, it is not possible to draw conclusions based on these data that could reveal deeper levels of understanding of the changes in the gender composition in psychology as it relates to racial and ethnic diversity.

Men's salaries exceed women's (in both current and adjusted dollars) in almost every industry group in every benchmark year.

FIGURE 4.2

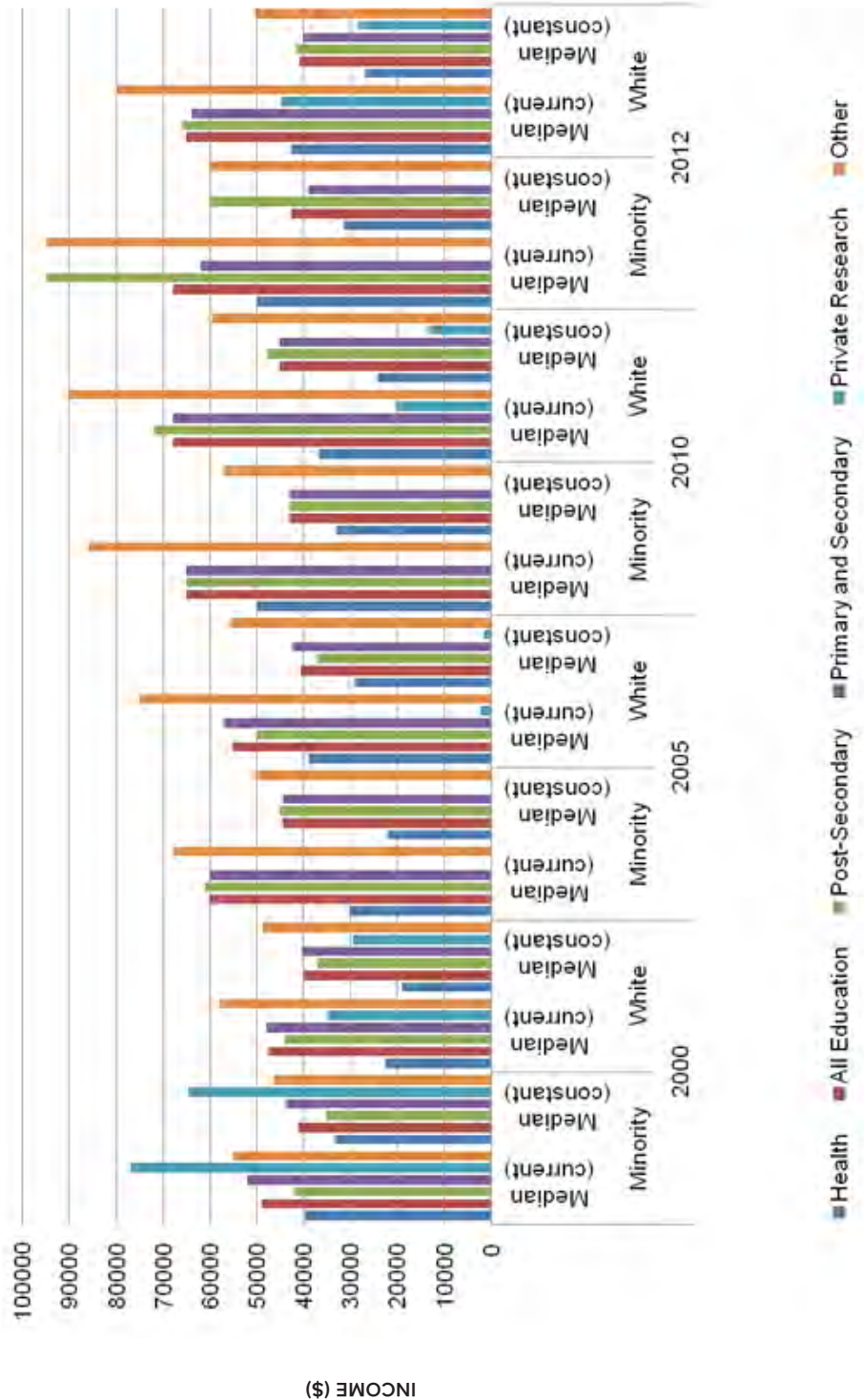
Wage Income by Industry for Gender: 2000, 2005, 2010, and 2012



Source: American Community Survey, selected years (U.S. Census Bureau, n.d.).

FIGURE 4.3

Wage Income by Industry for Race/Ethnicity: 2000, 2005, 2010, and 2012



Source: American Community Survey, selected years (U.S. Census Bureau, n.d.).

Salaries Across Employment Settings

In addition to broad fields or industry sectors in the workforce, wage comparisons also can be made for more specific employment settings in which psychologists are located. **Tables 4.12 and 4.13** provide data based on an NSF Survey of Doctorate Recipients in which psychology salaries were examined by both gender and race/ethnicity across three benchmark comparison years: 1993, 2001, and 2010. As Table 4.12 shows, the salaries of men are higher than women's in all categories and benchmark years, and the percentage of women's to men's salaries actually has fallen over time rather than improved (perhaps due, in part, to larger numbers of young women entering the workforce for the first time).

As Table 4.12 shows, the salaries of men are higher than women's in all categories and benchmark years, and the percentage of women's to men's salaries actually has fallen over time rather than improved (perhaps due, in part, to larger numbers of young women entering the workforce for the first time).

TABLE 4.12

Median Annual Salaries (in Dollars) of Psychology Doctoral Degree Recipients by Employment Setting and Gender: 1993, 2001, and 2010

Employment setting	Current/ adjusted	1993		2001		2010		Women's salaries as % of men's salaries		
		Men	Women	Men	Women	Men	Women	1993	2001	2010
2-year college	Current	50,000	46,000	60,000	54,000	79,000	63,000	92.0	90.0	79.7
	Adjusted	80,608	74,159	78,924	71,032	84,398	67,305			
4-year college or medical institution	Current	50,000	43,000	65,000	51,000	81,000	67,000	86.0	78.5	82.7
	Adjusted	80,608	69,323	85,501	67,085	86,535	71,578			
Government	Current	53,000	50,000	66,000	61,000	98,000	90,000	94.3	92.4	91.8
	Adjusted	85,444	80,608	86,816	80,239	104,697	96,150			
Business/industry	Current	60,000	50,000	75,000	57,000	100,000	70,000	83.3	76.0	70.0
	Adjusted	96,730	80,608	98,655	74,978	106,834	74,784			
Total	Current	54,000	46,000	70,000	55,000	90,000	70,000	85.2	78.6	77.8
	Adjusted	87,057	74,159	92,078	72,347	96,150	74,784			

Note. Adjusted salaries were converted to 2013 dollars using the Bureau of Labor Statistics Consumer Price Index Inflation Calculator (http://www.bls.gov/data/inflation_calculator.htm). Data include those whose highest degrees are doctorates in psychology and are employed (full-time and part-time).

Source. Scientists and Engineers Statistical Data System (SESTAT), Integrated Survey Data for 1993 (NSF, n.d.-a) and Survey of Doctorate Recipients for 2001 and 2010 (NSF, n.d.-b).

Cohort Effects in Salaries

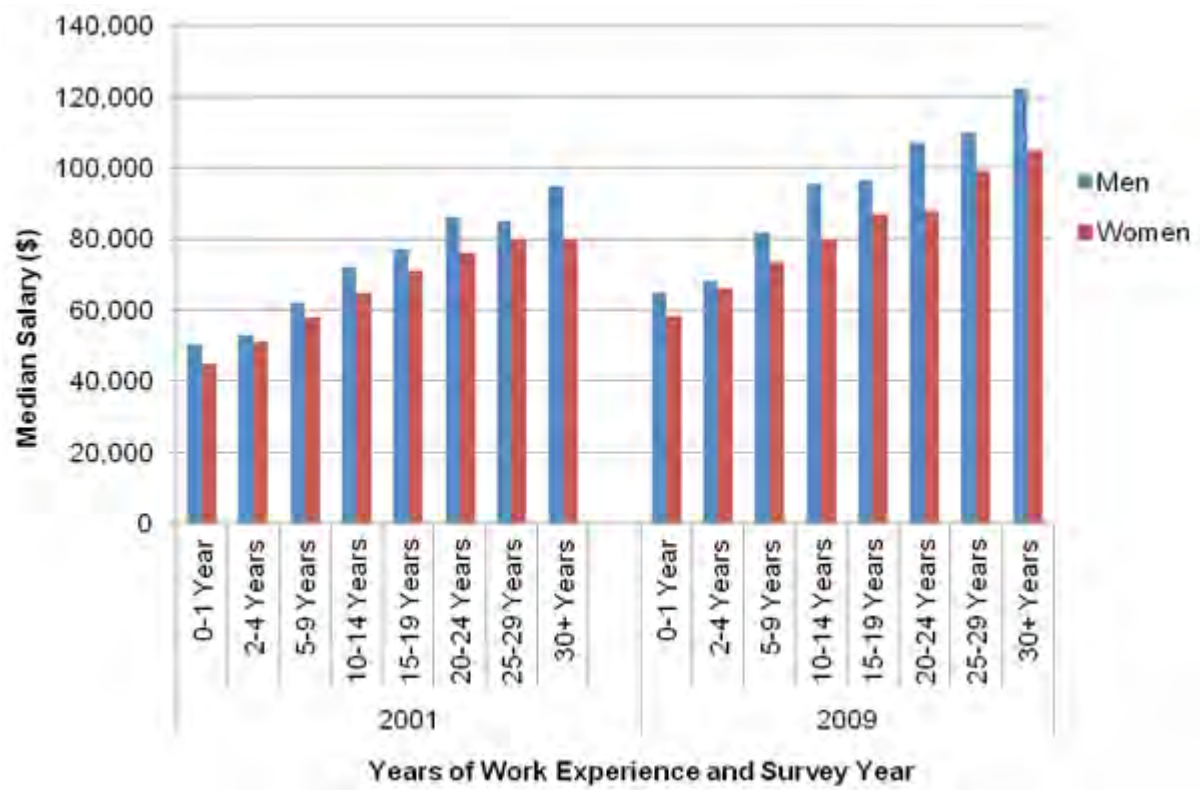
One of the arguments made in relation to the gender pay gap is that there are cohort effects that should be taken into account—that is, women’s compensation will achieve parity with men’s when they have been in the workforce longer. **Figures 4.4 and 4.5** present salaries across two benchmark comparison years (2001 and 2009) for both gender and race/ethnicity to explore possible cohort effects. These data, from the APA Salary Survey of APA members (Finno, Michalski, Hart, Wicherski, & Kohout, 2010; Singleton, Tate, & Randall, 2003), also factor in work experience to determine whether salary gaps hold across experience levels. As Figure 4.4 shows (and consistent with all of the other salary information presented), men out-earn women at all levels of experience, and although the gap appears to be decreasing somewhat among newer cohorts, the more recent 2009 data suggest larger gender wage gaps in older cohorts (i.e., more than 10 years of experience) than appeared in 2001, rendering questionable the general assumption that wage gap problems are improving over time at all levels.

Figure 4.5 presents similar data for racial/ethnic minorities. As with the other data on compensation, these data show slightly more variability than the data on gender, with members of racial/ethnic minority groups out-earning Whites about half the time, and there also is a slight trend toward greater earnings in newer cohorts relative to their White counterparts (see Appendix C for detailed tables).

Men out-earn women at all levels of experience, and although the gap appears to be decreasing somewhat among newer cohorts, the more recent 2009 data suggest larger gender wage gaps in older cohorts (i.e., more than 10 years of experience) than appeared in 2001, rendering questionable the general assumption that wage gap problems are improving over time at all levels.

FIGURE 4.4

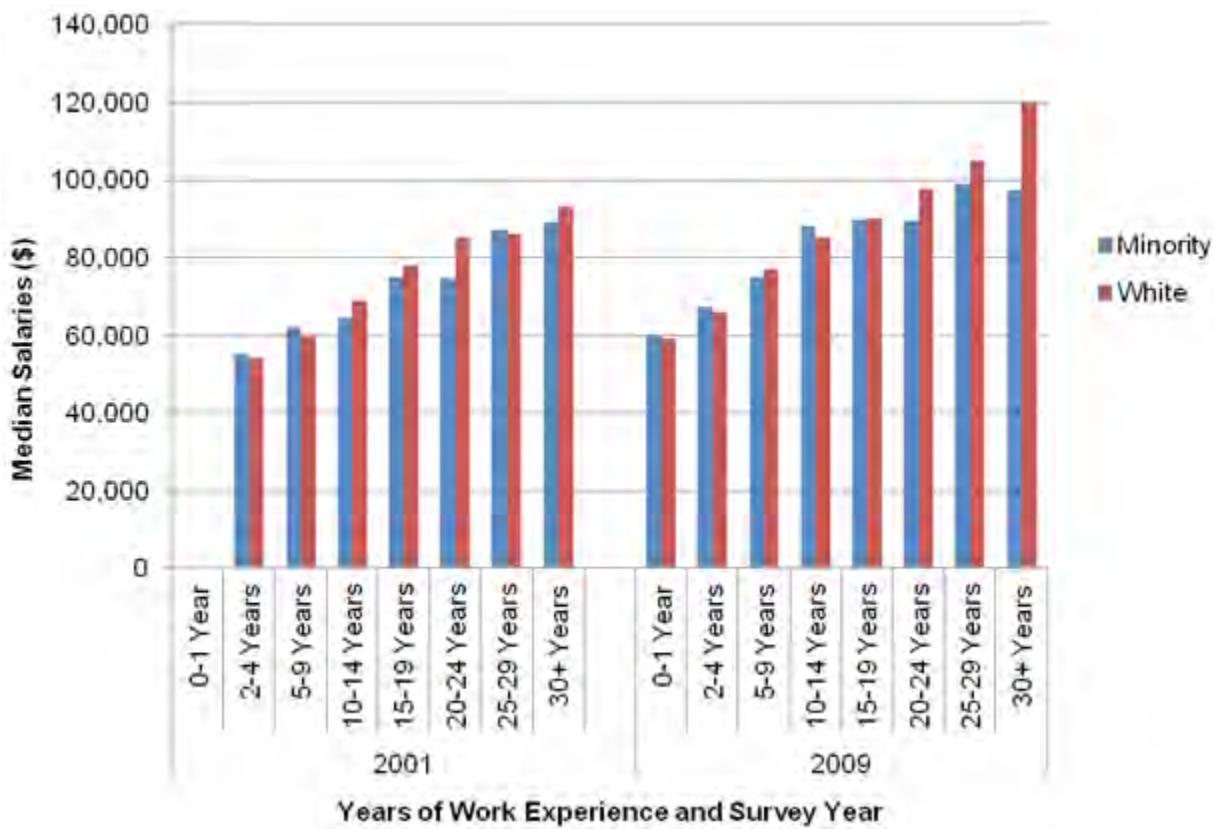
Full-Time Salaries of Doctoral-Level Respondents Across All Settings by Years of Work Experience and Gender: 2001 and 2009



Source. Report of the APA Salary Survey, selected years (APA, n.d.-e).

FIGURE 4.5

Full-Time Salaries of Doctoral-Level Respondents Across All Settings by Years of Work Experience and Minority Status: 2001 and 2009



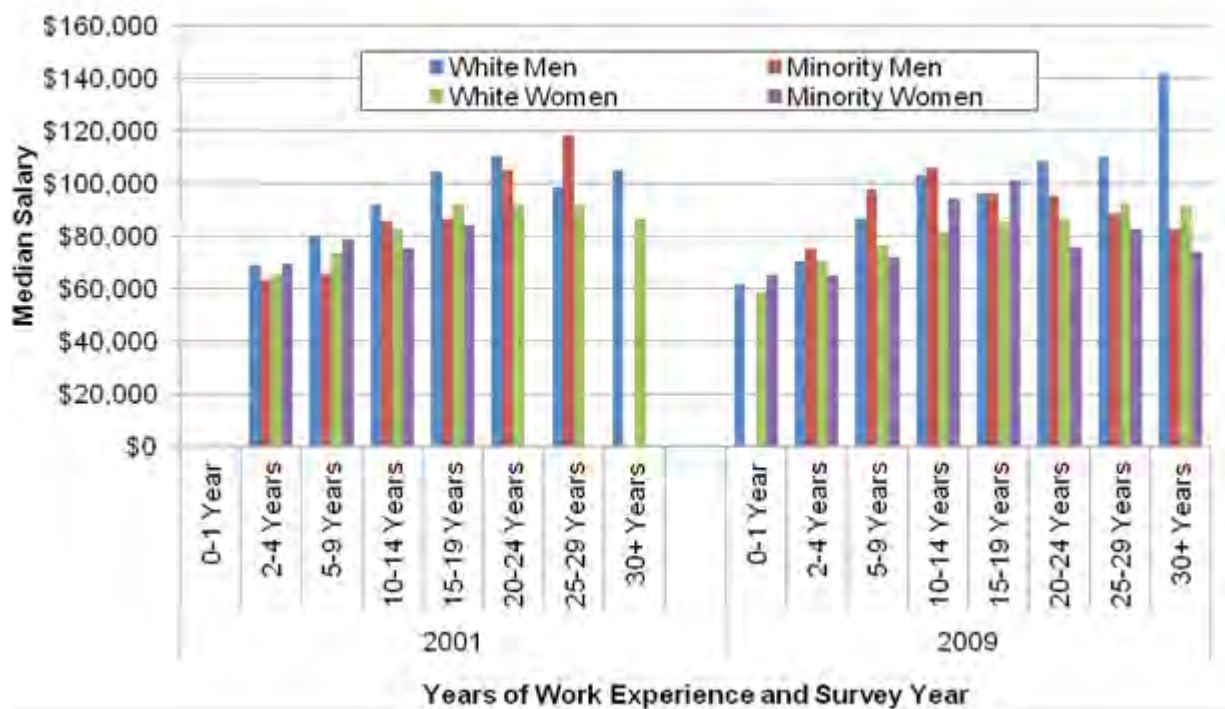
Note. Data for 0–1 year of work experience were not collected in 2001.

Source. Report of the APA Salary Survey, selected years (APA, n.d.-e).

Finally, because health service provider positions figure so prominently in the psychology workforce, **Figure 4.6** and **Table 4.13** show the cohort salary (adjusted for inflation) patterns for those in direct human service positions for these same benchmark years by both gender and race/ethnicity (these are APA Salary Survey data, as above, but with those in health service provider positions separated out for examination). As can be seen in Figure 4.6 and Table 4.13, salary gaps generally are smaller in newer cohorts, as might be expected. However, White men in full-time employment out-earn White women in full-time employment in all 15 experience categories across both years—and most dramatically in older cohorts in the most recent year represented here (2009), where the difference is more than \$46,000.

FIGURE 4.6

Median Full-Time Salaries for Doctoral-Level Respondents in Direct Human Service Positions by Gender and Minority Status (Adjusted for Inflation)



Note. Data for 0–1 year of work experience were not collected in 2001.

Source. Report of the APA Salary Survey, selected years (APA, n.d.-e).

Recent data on salaries in higher education indicate that academic salaries in psychology lag well behind overall faculty averages at every rank and in every institutional type.

TABLE 4.13

Median Full-Time Salaries for Doctoral-Level Respondents in Direct Human Service Positions by Gender and Minority Status (Adjusted for Inflation)

No. of years	Current adjusted	White men	N	Minority men	N	White women	N	Minority women	N
2001									
0–1 year	Current		1				3		
	Adjusted								
2–4 years	Current	\$52,500	38	\$48,000	5	\$50,000	77	\$53,000	15
	Adjusted	\$69,058		\$63,139		\$65,770		\$69,716	
5–9 years	Current	\$60,500	126	\$50,000	10	\$56,000	147	\$60,000	19
	Adjusted	\$79,582		\$65,770		\$73,662		\$78,924	
10–14 years	Current	\$70,000	141	\$65,000	11	\$63,000	137	\$57,500	18
	Adjusted	\$92,078		\$85,501		\$82,870		\$75,635	
15–19 years	Current	\$79,500	184	\$66,000	7	\$70,000	138	\$64,000	15
	Adjusted	\$104,574		\$86,816		\$92,078		\$84,185	
20–24 years	Current	\$84,000	223	\$80,000	7	\$70,000	118		3
	Adjusted	\$110,493		\$105,232		\$92,078			
25–29 years	Current	\$75,000	171	\$90,000	7	\$70,000	68		1
	Adjusted	\$98,655		\$118,386		\$92,078			
30+ years	Current	\$80,000	124		2	\$66,000	42		3
	Adjusted	\$105,232				\$86,816			
2009									
0–1 year	Current	\$57,000	25		2	\$54,206	42	\$60,000	13
	Adjusted	\$61,894				\$58,860		\$65,152	
2–4 years	Current	\$65,000	93	\$69,500	18	\$64,778	277	\$60,000	58
	Adjusted	\$70,581		\$75,467		\$70,340		\$65,152	
5–9 years	Current	\$80,000	137	\$90,000	21	\$70,500	278	\$66,500	60
	Adjusted	\$86,869		\$97,727		\$76,553		\$72,210	
10–14 years	Current	\$95,000	143	\$98,000	14	\$75,000	221	\$87,000	30
	Adjusted	\$103,157		\$106,414		\$81,439		\$94,470	
15–19 years	Current	\$89,000	191	\$89,000	14	\$79,000	240	\$93,458	22
	Adjusted	\$96,641		\$96,641		\$85,783		\$101,482	
20–24 years	Current	\$100,000	221	\$88,000	11	\$80,000	220	\$70,000	17
	Adjusted	\$108,586		\$95,556		\$86,869		\$76,010	
25–29 years	Current	\$101,395	272	\$81,500	14	\$85,000	195	\$76,000	13
	Adjusted	\$110,101		\$88,498		\$92,298		\$82,525	
30+ years	Current	\$130,500	411	\$76,100	20	\$84,350	180	\$68,000	9
	Adjusted	\$141,705		\$82,634		\$91,592		\$73,838	

Note. Data for 0–1 year of work experience were not collected in 2001. No statistics were provided where the N of respondents was less than 5.

Source. Report of the APA Salary Survey, selected years (APA, n.d.-e).

Academic Salaries

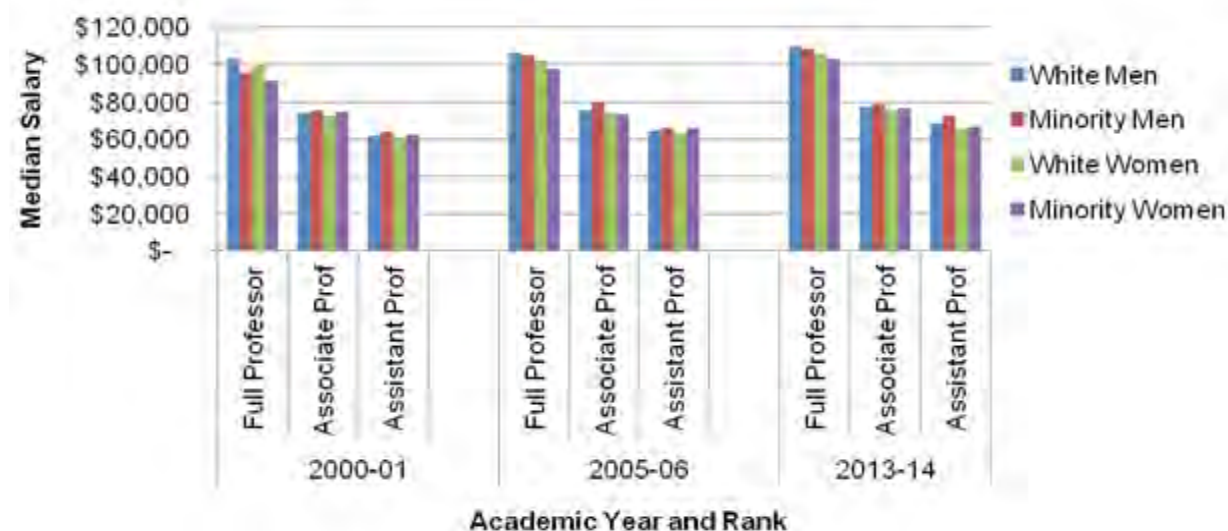
Academic salaries are important to examine because academe has been a primary source of employment for psychologists, and yet, decreases in entry into academic positions have been occurring in recent years (see Chapter 2). The 1995 report speculated that working conditions (e.g., autonomy), available full-time positions, and compensation in academic positions were declining, perhaps beginning to render them less attractive as career options, and the data in this current report corroborate those speculations. Indeed, recent data on salaries in higher education (Jaschick, 2014) indicate that academic salaries in psychology lag well behind overall faculty averages at every rank and in every institutional type.

Figure 4.7 and **Table 4.14**, from CWS's faculty salary surveys, show the full-time salaries (adjusted for inflation) by gender and race across U.S. graduate departments of psychology in three comparison years (2000–2001, 2005–2006, 2013–2014). As can be seen in the figure and table, the salary gap favoring White men is consistent for White women in all ranks and all three time periods (a difference range of about \$1,000–\$5,000). Racial/ethnic minority men out-earn White men in six out of the nine data points, all at the lower ranks (averaging a difference of about \$1,000–\$7,000 higher or lower). When White women are compared to minority men, the gender wage gap favoring men increases to a range of about \$2,000–\$6,000, and their earnings are less than minority men's in almost all (eight of nine) data points. Racial/ethnic minority women earn less than White women in about half (four) of the data points, and in the five categories in which they earn more than White women (all at lower ranks), they still earn less than racial/ethnic minority men in almost all of them (the one category in which their earnings exceed men's is only marginal; see Appendix C for additional data).

Racial/ethnic minority women earn less than White women in about half (four) of the data points, and in the five categories in which they earn more than White women (all at lower ranks), they still earn less than racial/ethnic minority men in almost all of them.

FIGURE 4.7

Median 9- to 10-Month Salaries for Full-Time Faculty in U.S. Graduate Departments of Psychology by Academic Rank, Year, Gender, and Minority Status (Adjusted for Inflation)



Source. Faculty Salary Survey, selected years (APA, n.d.-d). Compiled by APA Center for Workforce Studies.

Lower financial support for women may mean less money for child care and household help, less travel to professional meetings, and less up-to-date equipment and research resources, thereby potentially hindering women's academic success (Kite et al., 2001) and reinforcing economic disparities in an ongoing cycle of cumulative disadvantage in earnings and achievement.

TABLE 4.14

Median 9- to 10-Month Salaries for Full-Time Faculty in U.S. Graduate Departments of Psychology by Academic Rank, Year, Gender, and Minority Status

Position	White men		Minority men		White women		Minority women	
	Current	Adjusted	Current	Adjusted	Current	Adjusted	Current	Adjusted
2000–2001								
Full professor	\$76,055	\$102,889	\$70,920	\$95,943	\$74,015	\$100,130	\$67,928	\$91,895
Associate professor	\$54,542	\$73,786	\$55,630	\$75,258	\$53,712	\$72,663	\$55,187	\$74,659
Assistant professor	\$46,000	\$62,230	\$47,300	\$63,989	\$44,083	\$59,637	\$46,350	\$62,704
2005–2006								
Full professor	\$89,281	\$106,496	\$88,158	\$105,156	\$85,650	\$102,165	\$81,702	\$97,455
Associate professor	\$63,142	\$75,317	\$66,626	\$79,473	\$61,865	\$73,794	\$61,442	\$73,289
Assistant professor	\$54,243	\$64,702	\$55,215	\$65,861	\$53,337	\$63,621	\$55,444	\$66,135
2013–2014								
Full professor	\$110,145	\$110,145	\$108,500	\$108,500	\$105,592	\$105,592	\$102,761	\$102,761
Associate professor	\$77,156	\$77,156	\$78,525	\$78,525	\$75,555	\$75,555	\$76,710	\$76,710
Assistant professor	\$68,640	\$68,640	\$72,600	\$72,600	\$65,900	\$65,900	\$66,950	\$66,950

Note. Adjusted salaries were converted to 2013 dollars using the Bureau of Labor Statistics Consumer Price Index Inflation Calculator (http://www.bls.gov/data/inflation_calculator.htm).

Source. Faculty Salary Survey, selected years (APA, n.d.-d). Compiled by APA Center for Workforce Studies.

Another consideration in understanding these data on academic compensation is that academe is a work setting that presents unique opportunities for income generation in addition to formal salaries (e.g., summer stipends, clinical practice, speaking and consulting, grant funding). Data on women psychologists (Task Force on Women in Academe, 2000) indicated that women in 1993 earned an average of only 47% of men's earnings in extra pay within and outside of their institutions, suggesting that even the observed wage gaps in formal salaries in academic settings severely underestimate women's overall earnings disadvantage relative to men. As but one example of inequity, the gender gap in research funding is typified by data regarding National Institutes of Health grants, which were awarded less often to women (who received 30% of grants awarded in 2012), and the average size of grants awarded to women (about \$421,000) was lower than the size of grants awarded to men (about \$507,000); moreover, these figures represent only a modest improvement over 2002 data (Shen, 2013). Lower financial support for women may mean less money for child care and household help, less travel to professional meetings, and less up-to-date equipment and research resources, thereby potentially hindering women's academic success (Kite et al., 2001) and reinforcing economic disparities in an ongoing cycle of cumulative disadvantage in earnings and achievement.

Compensation Summary

Overall, the data on compensation for psychologists appear to mirror—perhaps especially sharply—the patterns in the U.S. workforce. That is, women’s compensation lags significantly behind men’s in virtually every sector and employment setting (including academe) over multiple time periods. Moreover, the prospects for improvement are uncertain, as some data point to a widening of the wage gap over time, whereas other data suggest a narrowing in younger cohorts. Finally, psychology is more poorly compensated than almost all other science-related fields, and the lower compensation seems to hit women particularly hard because psychology exhibits a greater gender wage gap than other fields. Data on racial/ethnic minorities appear more mixed (probably due, in part, to sampling variability), with some data indicating disadvantage relative to Whites, and some data suggesting parity with or surpassing compensation for Whites.

As with the data on work status, knowing that psychologists appear to manifest similarities to the overall U.S. workforce is not sufficient to explain what underlies existing patterns. Without more in-depth data collection, it is impossible to determine the exact reasons for the persistent gender wage gap in psychology. As the data in this section suggest, the earnings of psychologists are related to occupational segregation (i.e., employment sectors and settings), full-time/part-time work status, family variables (e.g., child care or other caregiving responsibilities), and workforce longevity, just as they are in the broader population of workers; however, these variables alone do not account for the observed wage gaps in the overall populations of female and male workers, and they do not explain fully the dramatic wage gaps in psychology.

There are a substantial number of other variables that have been implicated in the gender wage gap overall, including geographic location, legislative and policy enforcement, collective bargaining and guild power, child and family care availability, transparency or secrecy of pay information, gendered workplace composition and tokenism (particularly in top leadership), employer/manager characteristics and attitudes, workplace climate, job/career counseling, mentoring and sponsorship (including access to “old boy” communication networks), advanced training opportunities, performance evaluation and “shadow jobs,” socioeconomic fluctuations, and gender roles (including wage expectations and salary negotiations as well as beliefs about family and caregiving; Catalyst, 2004; Evers & Sieverding, 2014; Fassinger, 2005; Institute for Women’s Policy Research, 2014; Judge & Livingston, 2008; Judge, Livingston, & Hurst, 2012; Ostroff & Atwater, 2003; Rose & Hartmann, 2004). As but one small illustrative example, an unpublished analysis by CWS of salary expectations (from Cassin, Singer, Dobson, & Altmaier, 2007) of graduate students in professional psychology (both PhD and PsyD) programs indicates that although women and men appear to have similar beliefs about what constitutes “adequate” compensation overall, and those intending to enter the private sector expect to make more money than other students, women expect to make significantly less in their careers overall, with a gap of about 18%. Understanding the reasons for this gap in expectations reflects just one small data need in substantial, targeted research efforts in the future, and all the variables noted above bear scrutiny in the goal to understand the status of women in the psychology workforce.

Patterns in Academic Positions

Faculty positions in psychology traditionally have been one of the top means of employment for doctoral graduates. Although recent trends suggest decreasing employment in postsecondary academic settings overall, data also indicate that psychologists continue to be employed in these settings, and they are likely to remain an important source of employment for psychologists in the near future. The 1995 report raised concerns about the academic workplace in light of trends that were observed at that time (e.g., tightening budgets, loss of autonomy, lack of research funding, growth of a contingent/non-tenure-track faculty), and it questioned

whether the increased entry of women into academic roles would be reflected in later advancement. Thus, this section examines gender patterns in the academic workforce specifically (wage data were presented above).

Women in Graduate Departments of Psychology

Recent analyses by CWS (Christidis et al., 2014) indicate that overall, since 1985, when women made up only 22% of U.S. graduate psychology faculty, their numbers have risen significantly, such that in 2013–2014 they occupied about 47% of faculty overall in psychology. In **Table 4.15**, the pattern of growth is tracked over three benchmark comparison years: 1995–1996, 2005–2006, and 2013–2014; departments are further categorized into health-service-provider and non-health-service-provider departments (data are from CWS Faculty Salary Survey; APA, n.d.-d). As the table shows, despite obvious growth, the numbers and percentages of women faculty lag behind men in all fields and across time, except for health service provider departments in 2013–2014, where women slightly exceeded men for the first time. The underrepresentation of women in academic positions (relative not only to men but to their overall presence in the education pipeline) mirrors patterns in other science-related fields (Hill et al., 2010; National Academy of Sciences, 2006), and research (e.g., Shaw & Stanton, 2012) confirms the postdegree entry into an academic position as one of the two most highly gender-laden career transitions identified (i.e., the points in the pipeline at which women exhibit the most significant loss).

TABLE 4.15
Faculty in U.S. Graduate Departments of Psychology by Gender and Field Over Three Time Periods

Variable	Gender	1995–1996		2005–2006		2013–2014	
		N	%	N	%	N	%
All fields	Men	5,181	66.2	3,951	57.6	3,310	53.2
	Women	2,650	33.8	2,910	42.4	2,911	46.8
Health service provider	Men	1,951	63.1	1,515	54.3	874	49.0
	Women	1,141	36.9	1,273	45.7	908	51.0
Nonhealth service provider	Men	3,204	68.4	2,218	60.3	1,430	55.6
	Women	1,482	31.6	1,459	39.7	1,144	44.4
Not specified	Men	26	49.1	218	55.1	1,006	53.9
	Women	27	50.9	178	44.9	859	46.1

Note. This table includes full- and part-time faculty in U.S. doctoral- and master’s-level departments of psychology, and it excludes faculty whose gender was not specified.

Source. Faculty Salary Survey, selected years (APA, n.d.-d). Compiled by APA Center for Workforce Studies.

Academic Ranks and Tenure

Because academic rank and tenure are the primary markers of career success and advancement among college and university faculty, **Figure 4.8** and **Table 4.16** present data regarding academic rank and gender for all part-time and full-time faculty in departments of psychology over the same three benchmark years as in the data above. Recent APA Center for Workforce Studies analyses using data from only full-time faculty (Chris-

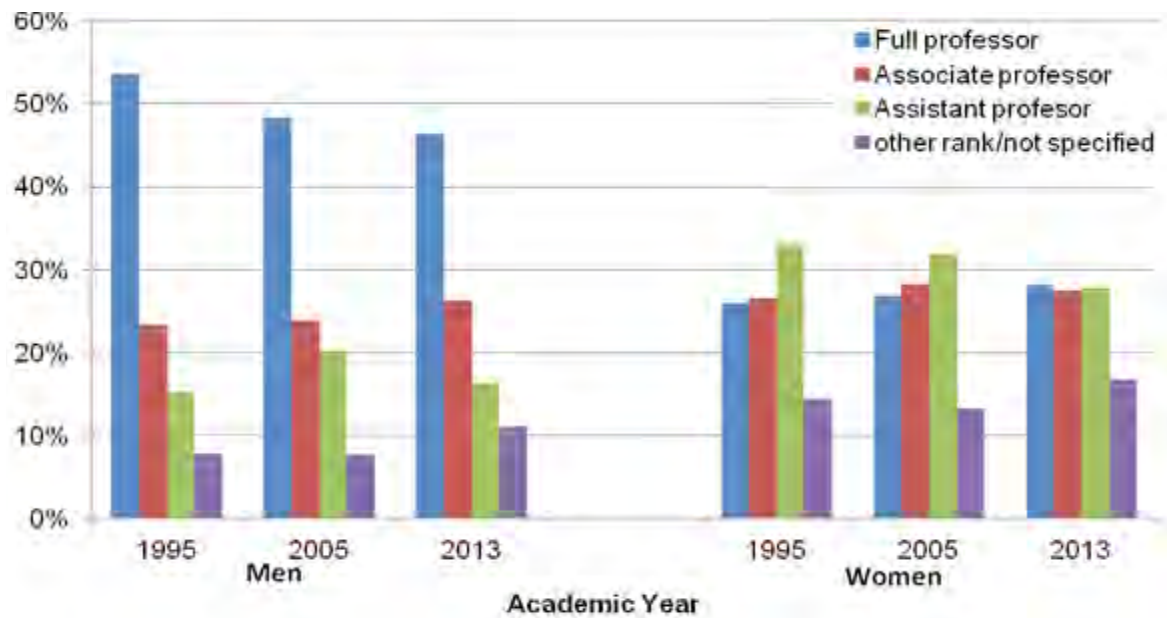
tidis et al., 2014) indicated that whereas the percentage of male full professors dropped from 88% in 1985 to 66% in 2013–2014, the percentage of female full professors nearly tripled in those years (from 12% to 34%). As Figure 4.8 shows, however, despite gains, women remain substantially underrepresented at the rank of “full professor” and overrepresented in the lower academic rank of “assistant professor” in all comparison years. Although women are very slowly expanding into the full professor ranks, their percentages at the associate professor level appear to remain fairly steady, and their percentages are consistently higher than men’s in the “other” category (indicating that they are overrepresented in nontenure track lecturer, adjunct, or other temporary positions contingent on ongoing funding). Moreover, the fact that their patterns of representation are evident in all three time periods challenges the common cohort-based notion that women just need to “catch up” to men now that many more of them are entering the field. On the contrary, these data suggest that the influx of women into psychology that began more than three decades ago has not resulted in their significant movement into the highest ranks of academia (see Appendix C for additional data). These data are consistent with research confirming that persistent gender effects, not just the “catch-up” process of academic inertia, are responsible for inequities between men and women in academic positions (Shaw & Stanton, 2012).

The exact nature of the gender effects likely to be linked to persistent inequity in academic status for men and women faculty in psychology cannot be ascertained from these data. Recent statistics (American Association of University Professors, 2014–2015; Newman, 2014) indicate that, across all doctoral universities, there are three times more male full professors than female full professors; by contrast, women in the lowest ranks as instructors outnumber men three to two. By comparison, the numbers in Figure 4.8 suggest that psychology departments appear more equitable than research universities more generally. However, data from the American Association of University Professors also indicate that women tend to be overrepresented in nonresearch institutions (e.g., 2-year colleges, professional schools), where tenure possibilities may be absent, teaching loads are likely to be higher, and salaries often are lower—but the climate may be warmer (Hagedorn & Laden, 2002). Thus, combined with the data from Table 4.15 (showing higher numbers of women in health service provider departments), the distribution of women faculty in psychology across ranks may, in reality, reflect a pattern of gender-related disadvantage in the academic workplace. Moreover, research (see Hill et al., 2010; Task Force on Women in Academe, 2000) points to a persistent “leaky pipeline” in which women increasingly are lost as they attempt to move up the academic ranks, failing to achieve tenure and promotion to associate professor, or getting “stuck” at the associate professor level indefinitely. Without more detailed data, it is difficult to determine the extent to which these kinds of barriers affect women faculty in psychology.

Similar data on representation across academic ranks were gathered regarding faculty who are members of racial/ethnic minority groups (contained in Appendix C). The data show that racial/ethnic minorities are underrepresented in full professor ranks and overrepresented in the lower ranks of associate and assistant professor relative to their White peers, and the percentages are strikingly similar to those for women.

FIGURE 4.8

Faculty in U.S. Graduate Departments of Psychology by Rank and Gender in Three Time Periods



Note. The figure includes only faculty whose gender was specified, and it includes both full-time and part-time U.S. faculty working in departments of psychology that award a master's, Doctor of Philosophy (PhD), Doctor of Psychology (PsyD), and/or Doctor of Education (EdD) degree.

Source. Faculty Salaries in Graduate Departments of Psychology, selected years (APA, n.d.-d). Compiled by APA Center for Workforce Studies.

TABLE 4.16

Faculty in U.S. Graduate Departments of Psychology by Rank and Gender in Three Time Periods

Variable	1995-1996		2005-2006		2013-2014	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Total faculty						
Full professor	3,463	44.2	2,682	39.2	2,356	37.9
Associate professor	1,912	24.4	1,764	25.8	1,663	26.7
Assistant professor	1,668	21.3	1,718	25.1	1,346	21.6
Other or rank not specified	788	10.1	685	10.0	856	13.8
Men						
Full professor	2,777	53.6	1,904	48.3	1,536	46.4
Associate professor	1,210	23.4	944	23.9	866	26.2
Assistant professor	790	15.2	796	20.2	538	16.3
Other or rank not specified	404	7.8	302	7.7	370	11.2
Women						
Full professor	686	25.9	778	26.8	820	28.2
Associate professor	702	26.5	820	28.2	797	27.4
Assistant professor	878	33.1	922	31.8	808	27.8
Other or rank not specified	384	14.5	383	13.2	486	16.7

Note. The table includes only faculty whose gender was specified, and it includes both full-time and part-time U.S. faculty working in departments of psychology that award a master's, Doctor of Philosophy (PhD), Doctor of Psychology (PsyD), and/or Doctor of Education (EdD) degree.

Source. Faculty Salaries in Graduate Departments of Psychology, selected years (APA, n.d.-d). Compiled by APA Center for Workforce Studies.

Table 4.17 shows the average number of years elapsed between doctoral attainment and promotion to associate professor (the mark of having achieved tenure in most academic institutions) for 2013–2014 (Appendix C contains additional data). As the table shows, it takes women an average of 1 year longer to achieve tenure and promotion compared to men overall, and this is particularly true in doctoral psychology departments. A similar comparison of White and racial/ethnic minority faculty (contained in Appendix C) shows no difference between the groups in time elapsed between degree attainment and tenure/promotion, suggesting that members of racial/ethnic minority group faculty progressed at about the same rates as their White counterparts.

Again, it is impossible to determine from these data the reasons for the lag: Does it take women more time to complete work? Are they distracted by caregiving? Are they now taking advantage of stopped tenure clocks for childbearing in institutions that encourage it? Or are there systemic institutional biases that prevent women's achievements from occurring in the first place or being appropriately recognized when they do? For several decades, research in women's career development has documented barriers to women's achievement and recognition, including in psychology (Kite et al., 2001; Task Force on Women in Academe, 2000). A recent study of tenure rates in doctoral programs in research universities across three different disciplines (computer science, sociology, and English; Weisshaar, 2014) is telling in this regard. The study found that men were significantly more likely to earn tenure than were women, even when controlling for research

productivity (e.g., 51% more likely in sociology, 55% more likely in computer science). Such findings support the claim (almost axiomatic in the vocational literature) that women need to be *more* productive than men to earn tenure at a research university—and this is in addition to the well-documented greater teaching and service burdens they carry relative to men (Hill et al., 2010; Kite et al., 2001; Task Force on Women in Academe, 2000). More detailed data would help to determine whether observed gender differences in psychology are chosen by women or imposed on them by barriers in the workplace.

TABLE 4.17

Number of Years Elapsed Between Doctorate and Promotion to Associate Professor for Faculty by Gender: 2013–2014

Department	Gender	<i>Mdn</i>	<i>M</i>	<i>SD</i>	<i>N</i>
Doctoral departments	Men	7.0	8.5	4.1	1,638
	Women	8.0	8.8	3.7	1,167
	Not specified	5.5	5.5	2.1	2
	All	8.0	8.6	3.9	2,807
Master's departments	Men	7.0	8.2	4.1	186
	Women	7.0	8.4	3.3	157
	All	7.0	8.3	3.8	343
All departments	Men	7.0	8.5	4.1	1,824
	Women	8.0	8.8	3.7	1,324
	Not specified	5.5	5.5	2.1	2
	All	8.0	8.6	3.9	3,150

Note. The table excludes faculty whose doctorate year or year of promotion to associate professor was not specified.

Source. Faculty Salaries in Graduate Departments of Psychology, 2013–2014 (APA, n.d.-d). Compiled by APA Center for Workforce Studies.

Academic Leadership

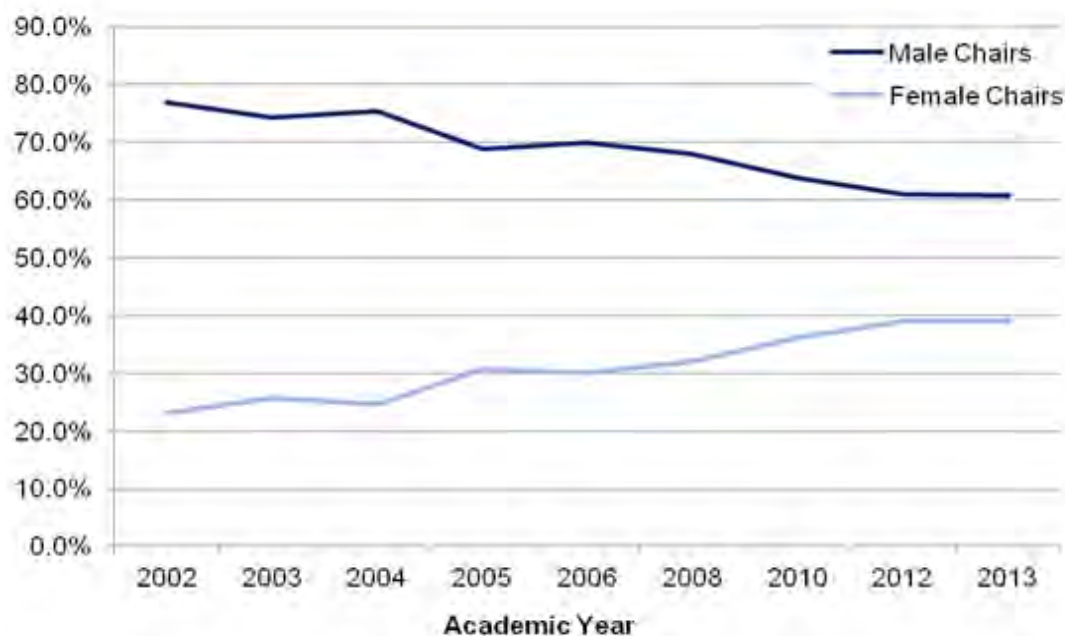
Figure 4.9 presents trends over time in women's attainment of positions in academic leadership in their departments, more specifically the position of "department chair" (data are from the CWS Faculty Salary Survey). As the figure shows, the proportion of female faculty that has taken on administrative roles has increased over the last 10 years, presumably due to cohort effects. That is, the cohort of women who entered the academic workforce two or three decades ago—and remained in it successfully by overcoming gender effects that might have forced their premature exit from the pipeline (Shaw & Stanton, 2012)—is becoming progressively senior over time and, thus, ready to assume leadership roles.

Similar data were examined for racial/ethnic minorities relative to their White counterparts (contained in Appendix C). The data show lower numbers of racial/ethnic minority faculty moving into department chair roles (approximately 14% in 2013–2014, compared to 86% Whites). Based on pure cohort effects (i.e., untainted by institutional racism), it might be expected that as recent cohorts of racial/ethnic minorities entering the

academic workforce remain in it successfully and become more senior, they too will be found increasingly in leadership roles in academia. Similar analyses to those testing for gender effects over and above the effects of academic inertia (Shaw & Stanton, 2012) would be helpful in illuminating the presumed trajectory for racial/ethnic minority faculty in psychology.

FIGURE 4.9

Gender of Department Chairs in U.S. Graduate Departments of Psychology



Note. The figure includes graduate departments of psychology that award a master's, Doctor of Philosophy (PhD), and/or Doctor of Psychology (PsyD) degree.

Source. Faculty Salaries in Graduate Departments of Psychology, selected years (APA, n.d.-d). Compiled by APA Center for Workforce Studies.

Scholarly Leadership

Given that scholarly activity is critically important to success in academic faculty positions in most colleges and universities (and especially so in institutions with very high research activity), it is worth examining women's patterns of participation in leadership roles in producing the scholarship in psychology. One recent analysis of eminence in psychology (Diener, Oishi, & Park, 2014) included only 14 women in a list of 100 "extremely eminent" modern psychologists (based on citations, awards, textbook pages, and Wikipedia entries). However, scholarly leadership also can be captured in the extent to which women participate in evaluating, shaping, and disseminating scholarship in the field. **Table 4.18** presents data regarding the participation of women and men in editorial roles for APA journals from 1995 through 2013 (data obtained from the APA Office of Publications and Databases, personal communication, July 28, 2014). The table shows the numbers of men and women

in roles as editors, action (or associate or guest) editors, consulting editors (regular reviewers who serve on editorial boards), and ad hoc reviewers (sought out occasionally for reviews).

As the table shows, scholarly leadership in APA journals is largely in the hands of men. If five benchmark comparison years (1995, 2000, 2005, 2010, 2013) are examined more closely and the percentages are computed, the data reveal growth in the percentage of women editors from 14% in 1995 to 30% or more in 2000, 2005, and 2010; however, a drop of 18% occurs in 2013 (which is almost as low as the 1995 level). Moreover, this does not appear to be an anomaly because the numbers decrease beginning in 2011 and continuing to 2013. For action editor positions, the data show a similar pattern—increases from 1995 through 2010, and then a precipitous decrease in 2013 to levels considerably below the 1995 level. Consulting editor (i.e., editorial board/reviewer) percentages have remained fairly constant, indicating that women compose about one third of the reviewers of the scholarly output in psychology. These data suggest, overall, that women are not represented in scholarly leadership in APA journals at levels of parity with those of men, and the situation appears to be worsening rather than improving in recent years.

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TABLE 4.18

APA Editorial Board Composition, by Gender (1995–2013)

Year	Editors				Action editors				Consulting editors				Ad hoc reviewers				Total			
	Men		Women		Men		Women		Men		Women		Men		Women		Men		Women	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>N</i>	%	<i>N</i>	%
1995	25	86	4	14	52	68	24	32	1,003	66	512	34	4,395	68	2,035	32	5,475	68	2,575	32
1996	28	85	5	15	52	60	34	40	974	69	437	31	4,632	69	2,107	31	5,686	69	2,583	31
1997	26	81	6	19	50	61	32	39	886	66	457	34	3,901	67	1,914	33	4,863	67	2,409	33
1998	24	83	5	17	53	59	37	41	894	66	454	34	4,020	68	1,901	32	4,991	68	2,397	32
1999	26	84	5	16	55	57	41	43	1,092	71	454	29	5,041	68	2,379	32	6,214	68	2,879	32
2000	21	68	10	32	52	65	28	35	874	70	380	30	5,027	68	2,416	32	5,974	68	2,834	32
2001	23	74	8	26	57	59	40	41	877	68	410	32	5,223	66	2,682	34	6,180	66	3,140	34
2002	23	74	8	26	65	56	52	44	949	68	455	32	5,840	64	3,251	36	6,877	65	3,766	35
2003	24	77	7	23	77	57	58	43	927	66	482	34	4,902	65	2,606	35	5,930	65	3,153	35
2004	23	74	8	26	77	59	54	41	866	68	416	32	4,872	64	2,778	36	5,838	64	3,256	36
2005	21	70	9	30	72	55	60	45	970	67	477	33	4,847	67	2,427	33	5,910	67	2,973	33
2006	26	70	11	30	112	53	99	47	1,097	64	608	36	6,312	61	4,000	39	7,547	62	4,718	38
2007	27	71	11	29	162	57	120	43	1,110	64	617	36	5,812	53	3,767	34	7,111	55	4,515	35
2008	30	77	10	26	191	60	126	40	1,237	64	674	35	5,194	57	3,286	36	6,652	59	4,096	36
2009	27	73	11	30	163	50	117	36	1,215	62	677	35	5,085	57	3,615	41	6,490	57	4,420	39
2010	28	65	15	35	238	63	138	37	1,291	64	729	36	4,931	60	3,324	40	6,488	61	4,206	39
2011	33	79	9	21	159	57	118	43	1,480	65	786	35	4,702	59	3,248	41	6,374	61	4,161	39
2012	28	76	9	24	147	54	123	46	1,464	64	810	36	4,178	59	2,856	41	5,817	60	3,798	40
2013	27	82	6	18	385	76	120	24	1,250	68	577	32	3,054	54	2,625	46	4,716	59	3,328	41

Source. APA Office of Publications and Databases, personal communication, July 28, 2014.

In sum, these data on women in academic psychology suggest persistent disadvantage at many levels and are consistent with previous reports on women faculty in psychology (e.g., Kite et al., 2001; Task Force on Women in Academe, 2000). Despite their increasing numbers in the educational pipeline, women in psychology are less likely than men to obtain employment in academe, and when they do, they do not progress at the same rate and speed, and they are overrepresented in lower ranks and in temporary or contingent positions. Even when they have succeeded and remained in academia, they are consistently underrepresented in both scholarly and institutional leadership.

As with other data in this report, the reasons for the observed patterns remain unclear. Several barriers to women's success in science-related fields have been documented (e.g., Hill et al., 2010; National Academy of Sciences, 2006), particularly in academic psychology (Kite et al., 2001; Task Force on Women in Academe, 2000). Some of them are worth enumerating here because they suggest the need for future data collection efforts aimed at better understanding the day-to-day lived experiences of female academic psychologists. A list of important factors to investigate might include the following: women's greater teaching and service burdens, women's lower levels of grant funding, gender stereotypes that prevent women's advancement, bias in performance evaluations and higher productivity demands for women, gender bias related to classroom experiences, lack of support and double standards for managing multiple roles, mentoring and sponsorship, workplace politics and climate (including experiences of harassment and microaggressions), and effects of the intersection of gender with other important identities and status variables (e.g., race/ethnicity, disability, social class, sexual orientation, transgender and gender nonconforming identity, and age/cohort). Future data collection efforts that query some of these areas are likely to be illuminating in fully understanding the challenges that women face in academic settings.

Finally, consistent with the speculations of the 1995 report, academic positions have, indeed, become more sparse, have more challenges, and have often been characterized by conflicting demands. Higher education increasingly is characterized as a tumultuous work setting, with severe ongoing budgetary problems, un(der) prepared students, parental interference, administrative intrusiveness, increased research expectations for tenure, diminishing external funding accompanied by greater demand for faculty to undertake funded research, escalating numbers of adjunct/contingent faculty, high service demands in increasingly student-centered learning environments, academic leadership increasingly recruited from among personnel devoid of academic experience, and demands for technological "innovation" in instructional delivery without institutional infrastructure or support (to name just a few of the myriad forces adversely affecting higher education today; Altbach, Gumport, & Berdahl, 2011; Blumenstyk, 2015). Such conditions increasingly may render academic jobs unattractive to psychology graduates (especially men) and throw into question the extent to which psychology will maintain its current status within the academy.

Patterns in Health Service Provider Positions

Because of the rapid growth of the health care market for employment of psychologists, it is important to document what is known currently about the labor force participation of psychologists who provide health-related services. The 1995 report noted several changes in the sociopolitical and economic climate potentially affecting health service providers in the future (e.g., the advent of managed care), but much of the commentary was speculative because the changes were relatively new at that time. This section provides updated information about health service provider psychologists.

Data in this section are from the APA Practitioner Surveys of 2008, 2011, and 2013 (administered by the APA Practice Organization/Directorate) and from APA's 2008 Health Service Provider Survey (Michalski, Mulvey, &

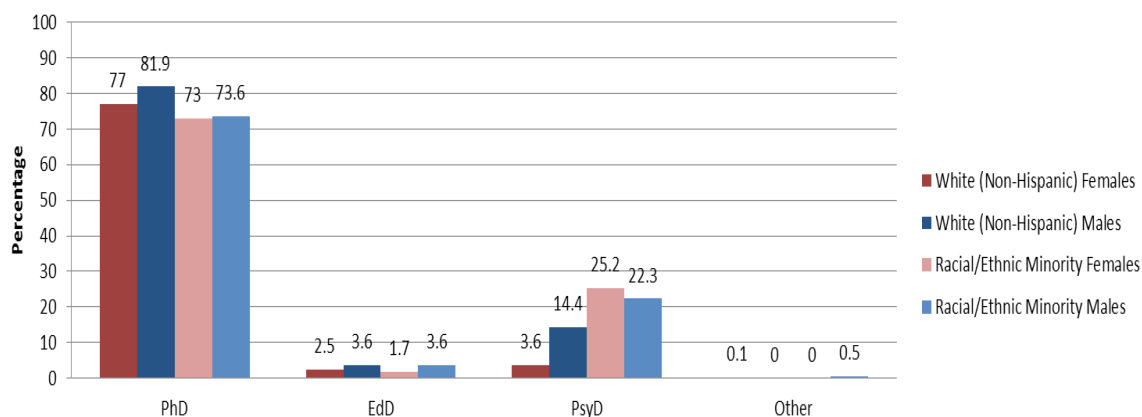
Kohout, 2010). This survey is of particular interest because the large database permitted testing of gender-by-race/ethnicity differences; as such, these differences provide some of the scant intersectional data available for this report, so a small sampling of it is included here. **Figures 4.10, 4.11, 4.12, and 4.13** present data from the 2008 survey, all of it tested (using chi-square analyses) for differences by gender and race/ethnicity combined (Appendix C contains additional data).

Figure 4.10 shows the highest degree attained by health service provider psychologists; differences were found to be statistically significant. For gender alone (see Appendix C), significantly fewer women than men reported a PhD as their highest degree, and fewer men than women reported a PsyD as their highest degree. As the figure shows and the gender-by-race testing bears out, these differences are centered in minority women, in that fewer ethnic minority women (73.0%) than White men (81.9%) reported their highest degree as a PhD, and fewer White men (14.4%) reported earning a PsyD than did ethnic minority women (25.2%) and ethnic minority men (22.3%).

The Practitioner Survey found that 79% of the 2013 respondents indicated a PhD as their highest degree, but among early career psychologists, almost half (46%) reported attaining a PsyD, suggesting that this degree has become more common among newer cohorts and (as newer cohorts contain large numbers of women), therefore, is more prevalent among women.

FIGURE 4.10

Highest Psychology Degree by Gender and Race/Ethnicity



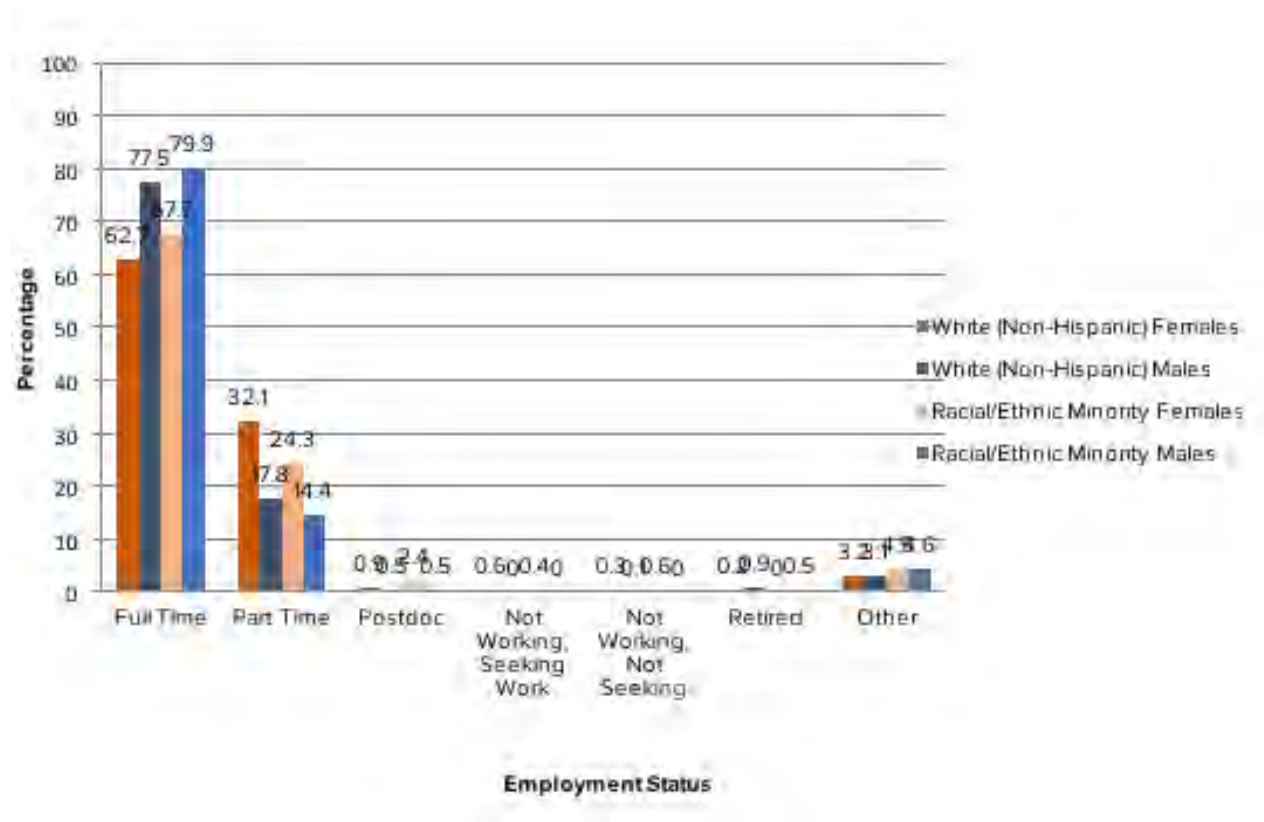
Note. $\chi^2(9, N = 5,923) = 59.841, p < .01$. PhD = Doctor of Philosophy; EdD = Doctor of Education; PsyD = Doctor of Psychology.

Source. 2008 APA Survey of Psychology Health Service Providers (Michalski et al., 2010). Compiled by APA Center for Workforce Studies.

Figure 4.11 shows employment status by both gender and race/ethnicity, and differences were found to be statistically significant. For gender alone (see Appendix C), significantly fewer women than men reported being employed full-time. As the figure shows and the gender-by-race testing bears out, differences were related to race/ethnicity in that White men (77.5%) reported higher levels of full-time employment than racial/ethnic minority women (67.7%). White women (32.1%) reported being employed part-time at higher levels than any other group, which is consistent with the work status data presented earlier in this chapter.

FIGURE 4.11

Psychologist Employment Status by Gender and Race/Ethnicity



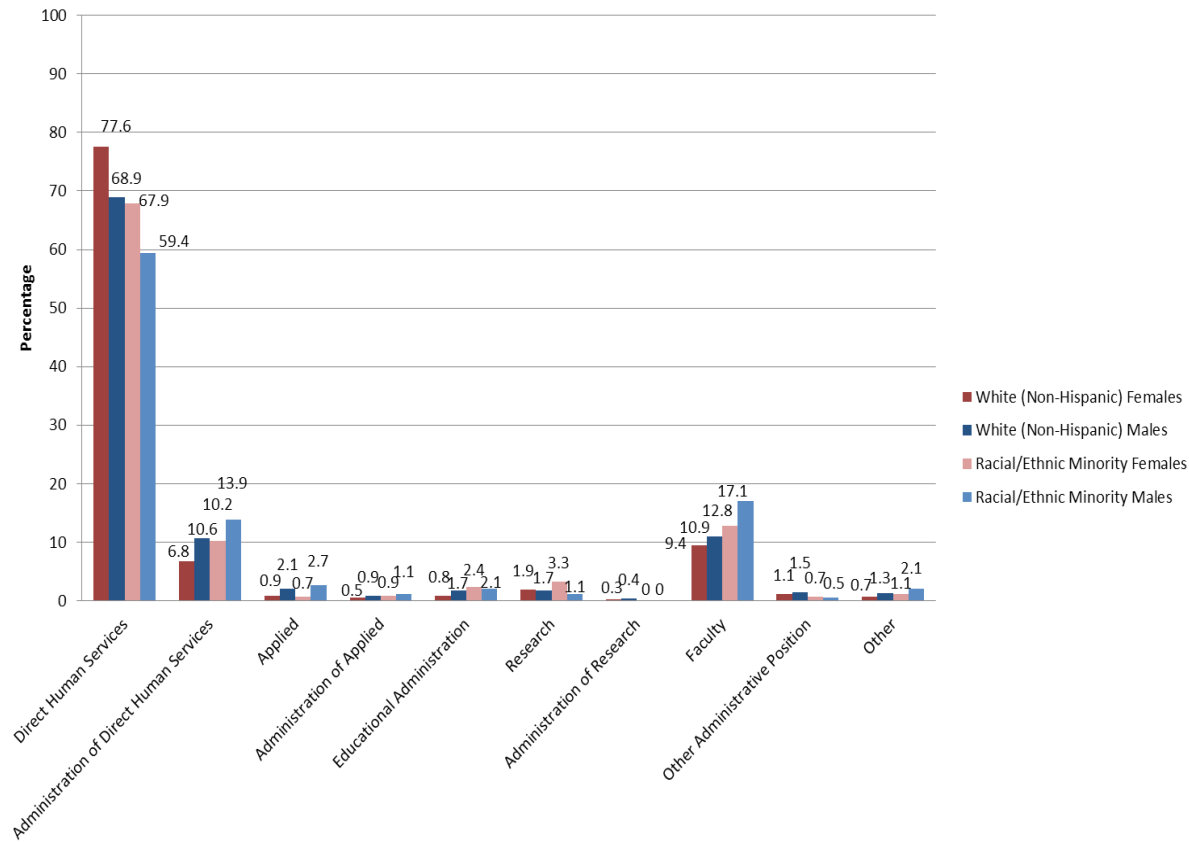
Note. $\chi^2(18, N = 5,977) = 214.141, p < .01$.

Source. 2008 APA Survey of Psychology Health Service Providers (Michalski et al., 2010). Compiled by APA Center for Workforce Studies.

Figure 4.12 shows the primary position type for both gender and race/ethnicity, and differences were found to be statistically significant. For gender alone (see Appendix C), significantly more women than men reported working in direct human services. As the figure shows and the gender-by-race testing bears out, differences were related to racial/ethnic minority status in that ethnic minority men (59.4%) were less likely than any other group to report their primary position type as direct human services.

FIGURE 4.12

Primary Psychologist Position Type by Gender and Race/Ethnicity



Note. $\chi^2(27, N = 5,831) = 115.495, p < .01$.

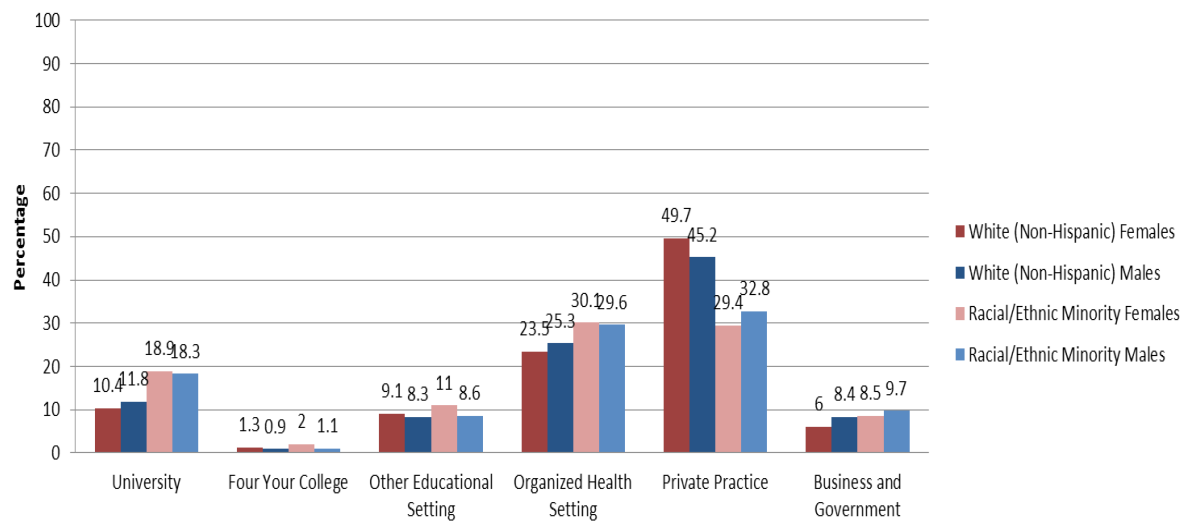
Source. 2008 APA Survey of Psychology Health Service Providers (Michalski et al., 2010). Compiled by APA Center for Workforce Studies.

Figure 4.13 shows the primary settings by both gender and race/ethnicity, and significant differences were found. For gender alone (see Appendix C), significantly more women than men reported private practice as their primary employment setting, and more men than women reported being employed in university settings, business, and government. As the figure shows and the gender-by-race testing bears out, differences were related to race/ethnicity in that both White men and White women reported being in private practice more often than did racial/ethnic minorities, and both minority men and minority women reported being employed in an organized health setting more than White women and men.

The Practitioner Survey data indicated overwhelmingly that independent practice, both solo (54% in 2013) and group (16% in 2013), was the primary setting for most respondents, and this was consistent over time; this finding makes sense given that the samples were largely White and more than half female.

FIGURE 4.13

Primary Work Setting by Gender and Race/Ethnicity



Note. $\chi^2(15, N = 5,775) = 102.500, p < .01$.

Source. 2008 APA Survey of Psychology Health Service Providers (Michalski et al., 2010). Compiled by APA Center for Workforce Studies.

Additional data from the two data sets indicate that most practitioners (about 72% in 2013) accept third-party payment, and less than 25% of their clients are self-pay—patterns that have held over time. Client caseloads for health service providers consist primarily of White adults younger than 65 years of age; a little more than half of them are women, and one quarter of them are racial/ethnic minorities. About 69% reported treating at least one low-income client, 63% treated at least one client with a disability, 52% reported seeing at least one lesbian/gay/bisexual client, 26% worked with at least one immigrant, and only 9% reported treating those older than 65 years of age (the latter finding is especially interesting given that the highest percentages of respondents in both surveys were 55 years of age [Health Service Provider Survey] or 60 years of age [Practitioner Survey] or older). Most (91%) health service providers reported treating Axis I disorders, and 70% reported treating adjustment disorders.

Since 2008, practitioners consistently have reported concerns over reimbursements, health care reform, accountability, and electronic record systems in terms of future impact on their practice, and almost half (45% in 2013) see themselves increasing their use of technology in the future (especially early career psychologists, for whom the percentage is higher, 54%). Other research (Pingitore & Scheffler, 2005) suggests that newer cohorts of practitioners are more likely to work in organized health care settings, and although career satisfaction appears to be high for practicing psychologists overall (Norcross & Rogan, 2013; Rupert, Miller, Tuminello Hartman, & Bryant, 2012), greater levels of stress (and for women, exhaustion) are associated with agency work than with independent practice (Rupert & Kent, 2007). Although APA Practitioner Surveys have found that some respondents expect changes in their professional settings in the future, the nature and direction of anticipated changes are unclear; that is, it is not known whether agency work (for example) is a temporary location used to build networks and reputation for eventual move into independent practice, or whether independent

practice (for example) represents a temporary, perhaps part-time, occupational choice for women who intend to move into an organized health-provider setting after caregiving responsibilities lessen in their lives. Expansion of APA's data collection in practice settings is needed to answer such questions definitively.

Taken together, these data suggest the following: Most health service provider psychologists are women; they are more likely than men to hold a PsyD than a PhD degree (particularly racial/ethnic minority women); they are more likely than men to be employed part-time (especially White women); they tend to work in direct services, particularly in independent practice if they are White and in an organized health care setting if they are racial/ethnic minorities or early career psychologists; they are likely to be more stressed and exhausted if they work in an agency setting; they are likely to work predominantly with White clients who exhibit Axis I or adjustment disorders; they are likely to be paid primarily through reimbursements; and they are likely to be satisfied with their careers.

Assuming that current patterns reflect career aspiration trends that will hold over time, the future psychology workforce may encounter some disconnect between its own demographics and the mental health needs in the U.S. population (Michalski et al., 2010). The need for more mental health services in racial/ethnic minority communities (including immigrants) is well-documented, as are the growing mental health needs of veterans, the homeless, incarcerated populations, trauma survivors, rural populations, and the aging, to name a few. Some of these populations (e.g., prisoners) traditionally have been served by male psychologists, and some require particular skills (e.g., language fluency) or preferred cultural similarities in professional helpers, making it unlikely that adequate services can be provided by (mostly White female) independent practitioners in the future.

Moreover, given the current realities of a health care system fighting to minimize costs, it is unlikely that services to these populations will be reimbursed at rates considered reasonable by psychologists in practice. Using data from the compensation section above (particularly Figure 4.6, psychologists in health service provider settings), averages of median salaries across gender and race/ethnicity place compensation for psychologists somewhere between about \$84,000 at middle levels (5–9 years) of experience and about \$98,000 for highest levels (30+ years) of experience; combined with the NSF data on psychologist salaries (at about \$86,000), it is reasonable to place expected psychology salaries for experienced practitioners in the \$85,000–\$90,000 range. CWS unpublished analyses (see Appendix C) of Bureau of Labor Statistics (BLS) data of annual wages in eight other behavior health occupations (essentially psychology's competitors in the health care marketplace) place annual mean wages between a low of about \$38,000 for rehabilitation counselors to a high of about \$53,000 for health care social workers, with clinical, counseling, and school psychologists at about \$73,000 (a low estimate because the BLS does not include self-employed workers). Even using the BLS low estimate, it is clear that psychologists' services cost more than most other comparable nonmedical professional helpers; in a health care system increasingly oriented toward bundling services into "integrated" models using a cost-effective diverse array of practitioners, it will require considerable advocacy for psychologists to gain and maintain recognition in this emerging environment. The viability of independent clinical practice thus is affected greatly by the yet-unmapped regulatory environment of the integrated care system as well as by guild, geographical, and technological factors (e.g., license portability, telepractice, specialty credentialing)—factors that are indicated consistently as worrisome by practitioners but not queried in depth in existing data collection efforts.

These findings leave the nagging question of where, how, and by whom the underserved populations judged to be in need of mental health services will be accommodated, and the corollary question of what populations will be served by independent psychology practitioners in the future. Although it is obvious that women are anticipated to be overrepresented in the health service provider workforce of the future, it is less clear whether women will go where the jobs are or whether practice conditions will continue to push women to choose, what appear to be, less than ideal work opportunities. Independent practice as an employment option for women psychologists seems on the surface to be a reasonable one: It is a "soft" business (helping-motivated

vs. profit-oriented) in which one has autonomy in setting fees, session times, location, and other aspects of day-to-day service delivery. It allows considerable flexibility in time commitment for women who have other obligations or priorities, such as caregiving or other jobs, and it offers relatively strong compensation, even for part-time work status, allowing it to function both as a sole means of support or a way to augment an inadequate salary from another position.

Many of the issues currently in play related to practice might be expected to particularly have an impact on women—for example, license portability, which could better accommodate women who need to move to other geographic locations, or telepractice, which might benefit women who prefer to work at home due to caregiving responsibilities. APA is advocating for practicing psychologists in these (and other) arenas as integrated care implementation unfolds. If, however, working conditions in practice settings (particularly independent practice) deteriorate such that these settings are no longer viable or desirable occupational choices for women (the majority of health service provider psychologists), the psychology workforce would change substantially—a workforce analysis question that begs more data.

Psychologists in Other Work Settings

Psychologists work in many settings besides the main sectors of health service provision and education. For example, as noted in Chapter 1 of this report, one of the growing areas of employment for psychologists is in government. **Table 4.19** shows the numbers of men and women psychologists in all federal agencies for 2013 (provided by Shelley Thomas, Human Capital Systems, U.S. Office of Personnel Management, personal communication, July 15, 2014). As can be seen in the table, the largest numbers of doctoral psychologists are located in the armed services, justice, and the Veterans Affairs (VA) system, with women dominating overall employment across the agencies. The VA, in particular, is a critically important location for psychologists in both training and employment—it is the largest single employer of psychologists, and it already utilizes a model of integrated care. As veterans' needs grow, the VA likely will become even more central in the future, suggesting a need for more attention to the issues of military personnel in training programs, more practice and internships in VA settings, and data collection efforts aimed at querying the parity issues for men and women psychologists in VA settings.

TABLE 4.19

Chief Human Capital Officers Agency Psychologists and Psychology Associates as of December 31, 2013

Agency	Master's		Post-master's		Doctorate		Post-doctorate		All levels	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Air Force	15	21	1	0	23	52	2	2	52	86
Agriculture	3	2	0	0	1	0	0	0	8	2
Army	156	89	15	15	264	243	32	32	531	416
Commerce	1	2	0	0	0	3	0	0	1	5
Defense	14	1	3	2	39	33	3	3	60	40
Justice	14	7	34	13	268	148	14	6	353	192
Labor	0	1	0	0	2	1	0	0	2	2
Energy	0	0	0	0	0	1	0	0	0	1

Table continues

Table 4.19 (continued)

Education	0	0	0	0	0	0	0	0	0	0
Health and Human Services	21	10	4	2	76	84	22	22	163	141
Homeland Security	12	3	2	2	8	5	0	0	28	14
Housing and Urban Development	0	0	0	0	0	0	0	0	0	0
Interior	2	3	1	0	1	0	0	0	9	3
Navy	45	32	7	3	70	65	11	15	150	134
State	0	0	0	0	1	3	0	0	1	3
Transportation	9	14	7	2	25	21	3	4	54	44
Treasury	2	0	0	0	0	1	0	0	3	1
Veterans Affairs	231	81	510	190	2,630	1,781	103	72	3,539	2,169
U.S. Agency for International Development	0	0	0	0	0	0	0	0	0	0
Environmental Protection Agency	1	0	0	0	1	3	1	3	4	6
General Services Administration	0	0	0	0	0	0	0	0	0	0
National Science Foundation	2	0	0	0	4	2	2	1	8	3
National Aeronautics and Space Administration	4	0	0	1	6	9	6	7	16	17
Nuclear Regulatory Commission	1	2	0	0	2	1	0	0	5	3
Office of Personnel Management	17	6	4	5	15	5	0	0	45	17
Small Business Administration	0	0	0	0	0	0	0	0	0	0
Social Security Administration	0	0	0	0	0	2	0	0	0	2
All chief human capital officers agencies	824		823		5,899		366		8,333	

Note. *Psychologist* refers to individuals with doctoral-level training. Individuals with less than doctoral-level training are referred to as *psychology associates*.

Source. Shelley Thomas, Human Capital Systems, U.S. Office of Personnel Management, personal communication, July 15, 2014.

Summary

This chapter on employment issues for psychologists indicates that the psychology workforce exhibits disadvantageous conditions for women that are similar to the U.S. labor force overall. In terms of occupational segregation, for example, women (including racial/ethnic minority women) tend to be found in educational and professional service roles, whereas men are more likely to occupy managerial and scientific roles. Women are more likely than men to be employed part-time and self-employed, and the presence of children is a significant factor linked to women's part-time work status. In terms of compensation, women's salaries lag significantly behind men's salaries, and psychology shows lower overall salaries and greater wage gaps than do other science fields. Moreover, some data suggest that the gender wage gap in psychology actually may have worsened over time. In academia, women's numbers are beginning to reach the same levels as men's (at least in health service provider subfields); however, it takes them an average of 1 year more than men to achieve tenure, and they remain underrepresented at the associate and full professor levels relative to men as well as in institutional leadership roles. Only about one third of psychologists involved in the scientific review process in APA journals are women, and far fewer women are in editorial roles. In health service provider subfields, similar patterns exist, with more women than men in service roles, especially independent practice, and women overrepresented in part-time employment, although career satisfaction appears high among practitioners. There are substantial numbers of psychologists currently working in government agencies, with women in the majority.

Taken together, these data suggest that psychology as a field has not yet achieved gender equity and that it has not moved any faster (and perhaps has moved even more slowly) than other comparable fields. It was noted several times throughout this chapter that the complexities of such issues as occupational segregation, wage gaps, part-time employment, effects of marriage and motherhood, and barriers to advancement and success for women psychologists are impossible to capture in these broad demographic snapshots of data. More in-depth analyses are needed (a) to explore the actual day-to-day experiences of female psychologists in the workplace, (b) to examine those experiences in relation to their expectations and aspirations, and (c) to link those data to larger societal demographic patterns to plan effectively for the psychology workforce of the future.

APPENDIX C contains additional details for Chapter 4 (see <http://www.apa.org/women/programs/gender-composition/index.aspx>).

5 PROFESSIONAL ACTIVITIES OF PSYCHOLOGISTS

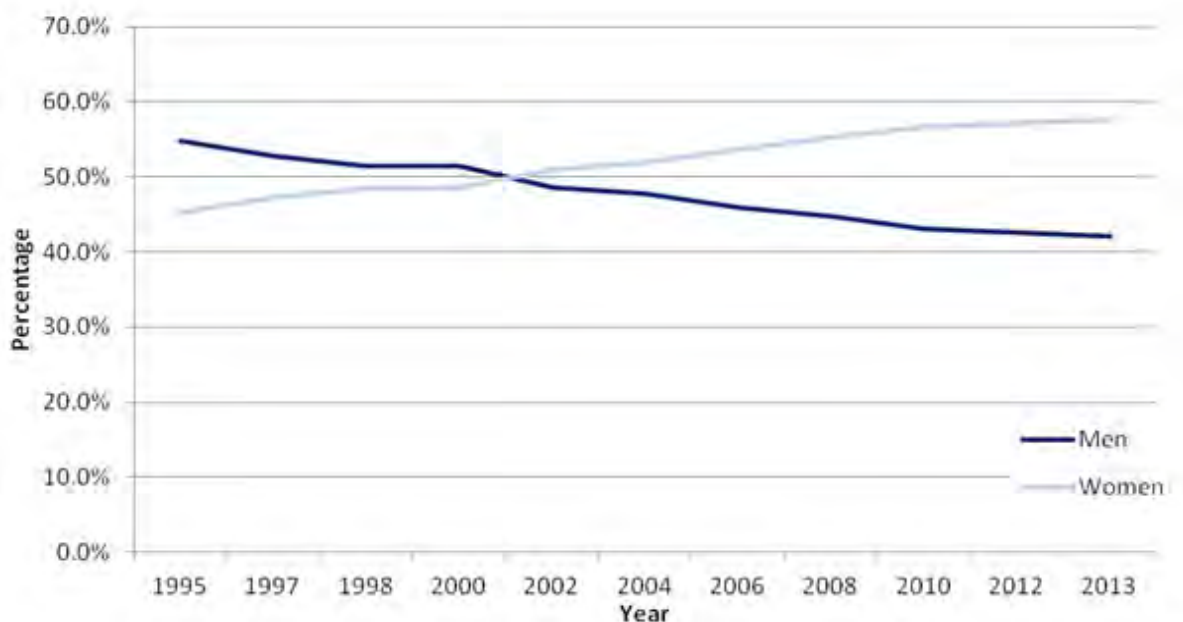
This chapter focuses on psychologists' professional activities, particularly their involvement in APA. As discussed in Chapter 2, of the approximately 79,000 psychologists who belong to APA, approximately 60% are women (about 52,000), approximately 15% are members of racial/ethnic minority groups, about 5%–10% identify as lesbian/gay/bisexual/transgender, and 1%–2% report having disabilities. The following data provide more detail about the population of psychologists in APA.

APA Membership and Divisional Participation

Figure 5.1 illustrates the total APA membership by gender over time. As can be seen, the gender composition of psychology has reversed over time. Starting with a majority of men (64%) in 1987 (not shown here), the gender gap began to decrease by 1995 (55% male, 45% female), and by 2002, the proportion of male (49%) and female (51%) membership was almost identical. By 2013, women made up the majority of APA membership at 58%. Although the percentage of the current membership indicates a nearly 60:40 gender split, it is not because men have been abandoning membership in great numbers. Rather, women's current majority is due to a more than 200% increase in the number of women members relative to their numbers in 1983. In contrast, there has been only a slight drop (–10.5%) in membership among men relative to their number in 1983. This gender shift was statistically significant (see Appendix D, Tables D.1.a and D.1.b, for additional data: <http://www.apa.org/women/programs/gender-composition/index.aspx>).

FIGURE 5.1

American Psychological Association (APA) Membership by Gender: 1995–2013



Source. APA Member Profiles, selected years (APA, n.d.-b). Compiled by APA Center for Workforce Studies.

In terms of membership in APA divisions, in 1991, 67% of women held divisional membership compared to 76% of men. In 2013, 35% of women held divisional membership compared to 47% of men, suggesting that whereas division affiliation has decreased overall, women remain underrepresented relative to men. Among the 54 divisions in 2013, women represented at least 55% of the membership in only 11 divisions, shown in **Table 5.1**.

TABLE 5.1

Divisions With at Least 55% Female Representation: 2013

Division	Men	Women	
	<i>N</i>	<i>N</i>	%
Division 20: Adult Development and Aging	424	512	55
Division 16: School Psychology	599	789	57
Division 38: Health Psychology	1,159	1,578	58
Division 37: Child and Family Policy and Practice	271	383	59
Division 39: Psychoanalysis	1,054	1,515	59
Division 7: Developmental Psychology	358	557	61
Division 45: Culture, Ethnicity, and Race	345	571	62
Division 53: Clinical Child and Adolescent Psychology	675	1,093	62
Division 56: Trauma Psychology	389	709	64
Division 54: Pediatric Psychology	301	765	72
Division 35: Psychology of Women	92	1,866	95

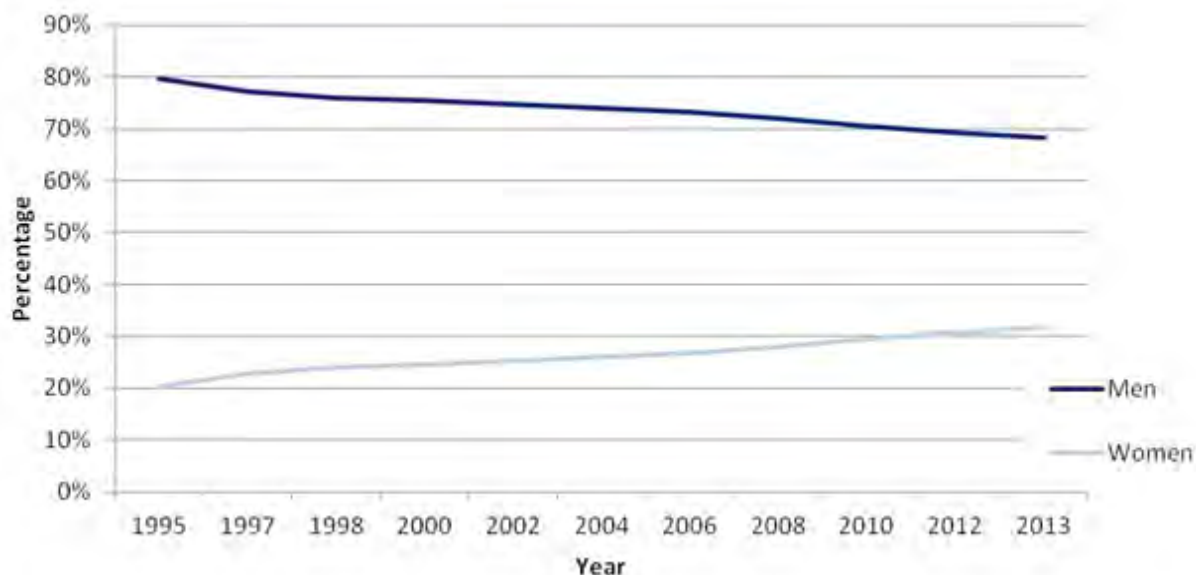
Source. APA Division Profiles, 2013 (APA, n.d.-b). Compiled by APA Center for Workforce Studies.

Awards and Honors

Figure 5.2 presents the gender patterns over time of the APA members who achieve Fellow status (the association's recognition of significant contributions to the field). As the figure shows, despite the growing number of female members at APA, men continue to outnumber women in the Fellow membership category. However, this disparity between male and female Fellows has steadily decreased over time. Analyses reveal that, in 1995, the proportion of male Fellows (80%) was significantly greater than that of female Fellows (20%). By 2013, the proportion of male Fellows was still significantly higher, but the gender gap had decreased, with approximately one in three Fellows being female (men = 68%; women = 32%). However, there is a great disparity when one considers proportional representation within gender.

FIGURE 5.2

American Psychological Association (APA) Fellows by Gender: 1995–2013



Note. Figure excludes members who did not specify their gender: 1995, $Z = 32.15$, $p < .001$; 2013, $Z = 23.64$, $p < .001$.

Source. APA Member Profiles, selected years (APA, n.d.-b). Compiled by APA Center for Workforce Studies.

Similar analyses of racial/ethnic minority members and Fellow status over time (see Appendix D) also reveal slowly increasing numbers of minorities and decreasing percentages of Whites in membership. However, members who have achieved Fellow status remain overwhelmingly White (91% in 1995, and 88% in 2013). The aging of the relatively young racial/ethnic minority cohorts may move many of them into Fellow status in the future if pure cohort effects, untainted by racial/ethnic bias, hold.

Fellow status in the association is a marker of achievement among members, but there also are 27 important APA-conferred awards and honors that signal the most notable accomplishments in the profession. In 2013, of 27 APA-wide awards, 10 of them were given to women, and three additional women awardees shared the recognition with men or with other women. Of 21 awards granted in 2014, seven were awarded to women, and five additional women shared awards with men or other women. In 2014, the American Psychological Foundation Lifetime Achievement Awards honored two women of the five awardees. Etaugh, Baum, and Geraghty (2014) analyzed the seven most long-standing, prestigious awards since their inception (using chi-square tests), and they found that men were honored significantly more often in six out of seven awards, with women marginally ahead in one. Women's award attainments have increased, but even in recent years, women have not earned more than 38% of the awards, and they have achieved parity only in one award (Contributions to Independent Practice). Women have been recognized in only 15% of the awards for Distinguished Scientific Contributions and in only 13% of the awards for Distinguished Scientific Applications of Psychology (Etaugh et al., 2014).

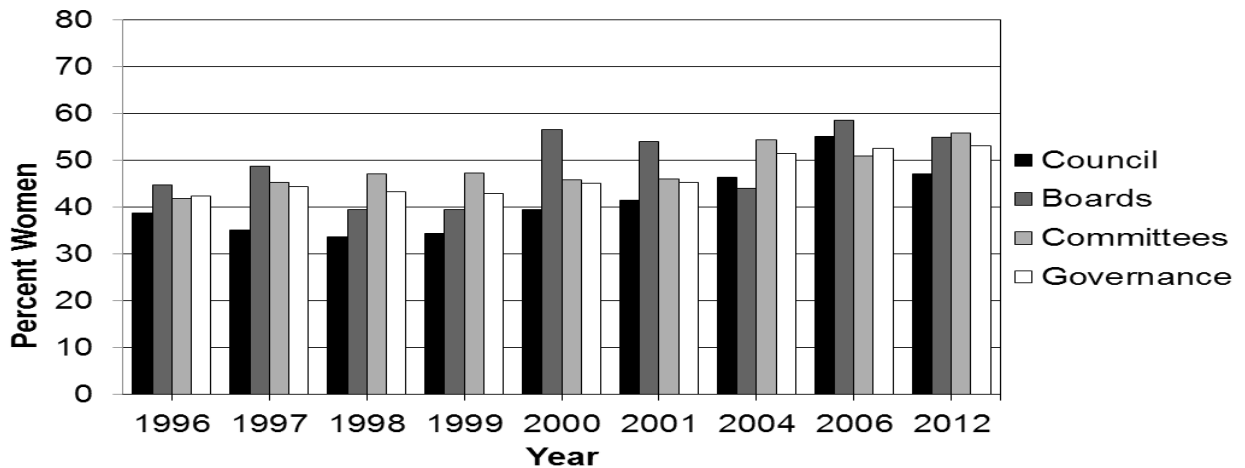
Participation in APA Governance

This section presents patterns of participation in APA governance, based on responses to APA's annual governance survey. In 2012, approximately 525 APA members were active in governance activities, and about 60% ($N = 322$) of them responded to the APA Governance Survey (Stamm & Christidis, 2013), which was compiled by the APA Center for Workforce Studies (CWS).

Figure 5.3 illustrates the proportion of women in various types of APA service from 1996 to 2012. As the figure shows, there have been increases in all categories of service, with more than 50% of recent governance positions held by women. In 2013, seven of the 12 Board of Directors of APA were women, two of them were racial/ethnic minorities, and one of them was an “out” lesbian. For the 2014 Board and Committee elections, 21 women and 17 men were elected to the available positions.

FIGURE 5.3

Proportion of Women by Type of Service and Year

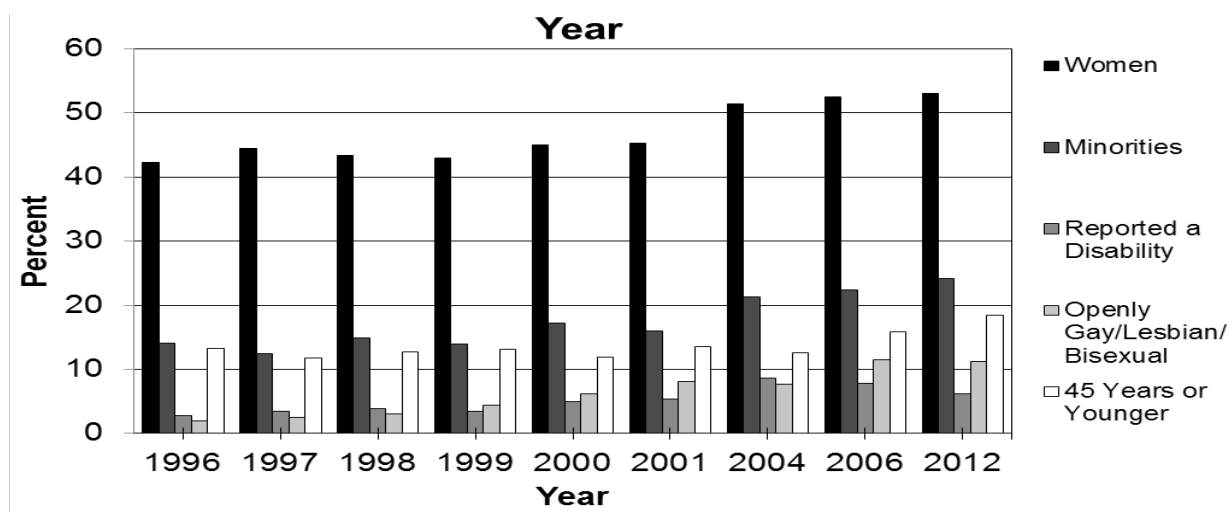


Source. APA Governance Survey (Stamm & Christidis, 2013). Compiled by the APA Center for Workforce Studies.

Figure 5.4 shows the demographic distribution of women relative to other underrepresented groups in APA governance. As the figure shows, the dramatic increases have been among women, but all other demographic categories also show steady rises over time, suggesting that APA as an organization is becoming increasingly diverse.

FIGURE 5.4

Demographics of Psychologists in APA Governance



Source. APA Governance Survey (Stamm & Christidis, 2013). Compiled by APA Center for Workforce Studies.

APA Central Office Administration and Staff

The composition of the APA central office administration and staff is another indication of the progress of the APA in addressing gender equity issues. **Table 5.2** presents a summary of selected benchmark years of APA's move toward a more diverse workplace (APA Human Resources Office, July 30, 2014, personal communication). As the table shows, the representation of women, including racial/ethnic minority women, has increased over time in all job categories and levels in which they previously had been underrepresented, demonstrating that APA is moving steadily toward its goal of becoming a diverse workplace.

TABLE 5.2

Employment of Women, Ethnic Minorities, and Ethnic Minority Women in the APA Central Office: 2001, 2010, and 2014

Job group	2001				2010				2014			
	Total # of employees	% ethnic minorities (EM)	% women	% EM women	Total # of employees	% EM	% women	% EM women	Total # of employees	% EM	% women	% EM women
1A	36	22.22	41.76	8.33	13	23.08	53.85	7.69	15	20	60	6.67
1B	52	13.46	73.08	11.54	79	22.78	63.29	15.19	82	24.39	67.07	17.07
1C	N/A	N/A	N/A	N/A	69	43.48	69.57	27.54	68	51.47	73.53	35.29
2A	38	18.42	71.05	13.16	123	21.95	66.67	14.63	125	28.8	62.4	18.4
2B	133	28.57	73.68	21.05	25	64	72	48	48	54.17	72.92	45.83
2C	N/A	N/A	N/A	N/A	54	50	83.33	37.04	56	37.5	67.86	28.57
2D	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	42	59.52	33.33	21.43
3A	39	28.21	38.46	15.38	51	47.06	29.41	19.61	D/C	D/C	D/C	D/C
4A	3	66.67	100	66.67	5	40	80	40	5	40	80	40
5A	60	55	75	38.33	96	69.79	83.33	62.5	79	69.62	73.42	53.16
5B	82	56.1	74.39	46.34	25	92	64	56	50	72	84	62
5C	47	76.6	80.85	59.57	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C
7A	5	100	40	40	D/C	D/C	D/C	D/C	D/C	D/C	D/C	D/C
Total	495	38.99	69.09	28.48	540	43.89	67.59	31.11	570	45.44	67.19	32.28

Note. Groups are labeled as follows: 1A = Executive Management (Chief Executive Officer and Executive Directors); 1B = Executive/Senior Management (Assistant Executive Directors and Directors); 1C = First-/Mid-Level Officials and Managers; 2A = Communications Professionals; 2B = Finance and Administrative Professionals; 2C = Governance Professionals; 2D = Information Systems Professionals (created in 2011); 3A = Technicians (discontinued after 2010); 4A = Sales; 5A = Administrative (Specialists, Assistants, and Coordinators); 5B = Administrative (Administrative Assistants, Clerks, and Support Personnel); 5C = Clerical (discontinued after 2001); 7A = Semi-Skilled—All (discontinued after 2007); N/A = job not applicable (not created at the time); D/C = job discontinued.

Source. APA Human Resources Office, July 30, 2014, personal communication.

Summary

For psychologists involved in APA, the status of women has improved. Although women continue a long-standing pattern of underrepresentation in the top honors in the association (i.e., Fellow status, prestigious awards), their numbers in governance have increased such that they now represent more than half of governance members in many areas. Likewise, APA staff itself has shown substantial increases in the presence of women—including minority women—in all APA job levels and categories in which they previously had been underrepresented, including management. However, an increase in numbers does not in itself ensure inevitable progress toward full equity. Second-class status is not simply a matter of numbers (Childs & Krook, 2008). New data in this and other reports encompassing several decades have documented persistent inequities, despite increasing numbers of women (e.g., APA, 1995; Task Force on Women in Academe, 2000).

The changing gender composition of psychology and of APA membership has been influenced by several factors. Briefly, men may have gained employment opportunities outside the confines of traditional psychology, whereas women may have gained employment opportunities directly related to education and training within psychology. For example, the scope of psychology has expanded continuously since the 1995 report on the changing gender composition of psychology. Much of the expansion has been interdisciplinary. In these instances, the primary affiliation may be with other professions and involve only secondary identification with psychology. To the extent that these interdisciplinary careers involve fields where men predominate—for example, neurosciences or industrial/organizational—men may have turned to other professional affiliations. Furthermore, where the primary work activity is research or analysis in private or government settings, psychologists may report to supervisors who have only limited concern about the professional memberships of employees.

At the same time, other structural factors may have created education and employment opportunities particularly attractive to women. The unprecedented expansion of education, community, and mental health services discussed in earlier chapters is one such structural factor. The opportunity for employment in health and social services has reflected steady growth for more than 20 years, equivalent to a generation of psychologists. Employment in these fields is often characterized by provision of care or interventions with the intent to resolve human problems and to alleviate distress for individuals and their relationships. These goals and work settings may be more compatible with the self-concepts and perceived skills of women than of men. Anyone seeking employment in these fields has limited choices as to professional affiliation—for example, educational counseling, social work, sports management, and psychology. Thus, women drawn to the health service or social justice sectors almost certainly would consider psychology as one field compatible with their aspirations.

However, it is seldom the case that structural factors can adequately account for complex patterns such as the gendered nature of leadership or the disparities in awards and recognition documented in this chapter. Dynamics of power, status, and influence color the ways in which structural factors affect people. Despite the increased number of women in psychology, the gendered patterns of part- versus full-time employment described in Chapter 4, the lower participation of women within APA divisions described in this chapter (see Table 5.1), and the distribution of major awards and recognition indicate that women have not achieved functional parity with men. The pattern is replicated in APA governance (see Figure 5.3), where women approached 50% of governance positions only as recently as 2004. The pattern of women holding lower positions and men holding senior authority is particularly striking in APA journals (APA, 1996), where, in 2013, women held only six of 33 chief editor positions (see Table 4.18). Collectively these disparities mean that policy and decision making are largely in the hands of men. Women's perspectives and opportunities to influence policy often must defer to those of men. Similarly, men have more influence in judgments regarding merit, achievement, priorities for the organization, training standards, ethics, and what constitutes core components of the field.

Many of the concerns discussed in the 1995 report on the gender composition of psychology remain issues and are noted in this report. Obviously, greater numbers do not translate automatically to equality. In this respect, progress requires an expanded view of diversity, separate from mere numbers. Diversity must address marginalized status and should be informed by principles of social justice. Substantive change requires a standard of close scrutiny for policy and procedures that have disparate impact, regardless of intent. It requires that we take seriously psychological research that points to gender stereotypes, shifting standards for evaluation, benevolent sexism, implicit bias, and subtle mechanisms in the exercise of power that tend to sustain privilege for some while imposing silence on others. Chapter 6 outlines future directions by which APA can take the lead in achieving educational and workplace equity.

APPENDIX D contains additional details for Chapter 5 (see <http://www.apa.org/women/programs/gender-composition/index.aspx>).

6 CONCLUSIONS AND RECOMMENDATIONS

Historical Context

The historical context for this report begins in 1969 with a demonstration during a Town Hall meeting at the APA annual convention. Members of the newly formed and independent Association for Women in Psychology protested inequities faced by women in psychology and within APA. Initial reports on the roles of women in psychology generally, and APA in particular, documented substantial disadvantage for women (Astin, 1972; Astin, Roose, Andersen, & Sorenson, 1973). As more women entered the field, concerns about the “feminization of psychology” emerged. This atmosphere might be seen as something of a backlash (see Ostertag & McNamara, 1991) that set the background for a 1986 report issued by the APA Committee on Employment and Human Resources on the “changing gender composition of psychology” (Howard et al., 1986). The 1986 report described growth in the health service provider areas and an increasing number of women entering the field. The report additionally noted that the largest numbers of doctorates in the field were being produced by departments that were not ranked or were ranked in the lower tier of graduate programs—a pattern most common for clinical, counseling, and school psychology. This indirectly may have raised the specter that women newly entering the field might be poorly trained.

Concerns about the “feminization” of any profession often are based on the assumption that, in itself, a predominance of women causes a decline in professional status and lower earnings. One unspoken and unacknowledged assumption may be that any decline is due to a lack of professional competence among women. In this respect, it would be well to consider the entrance of women into other professions and their gradual increase in number—for example, dentistry, education, health care, or law. Unless one assumes a universally low level of professional competence among women across these disparate fields, one cannot rely solely on epidemiology (or identity politics) to attribute blame for the declining status of a profession. Alternatively, an argument might be advanced that a change in the nature of a field and the imposition of more regulatory standards on any profession may precede the departure of men from that field. That is, it is the changing nature of the profession and the departure of men that enable the entrance of women and not the reverse (Adams, 2008). For example, in the health service provider area, group and interprofessional practice settings are increasingly shaped by third-party reimbursement standards that subordinate psychological expertise to medical expertise and corporate interests. Even in solo practice settings, case conceptualization and the number of visits must adhere to third-party standards. At the same time, tenure track professorial positions in college and university settings appear to be declining in favor of nontenure track positions and part-time employment.

Despite fears of “feminization,” some held the hopeful expectation, drawn from political science, that equity for women would automatically emerge when a critical mass was reached (Dahlerup, 1988; Kanter, 1977a, 1977b). The inference that tokenism and second-class status could be corrected simply by increased numbers is a common, but mistaken, understanding of this theory (Childs & Krook, 2008). The mistake was underscored by later reports on the status of women in psychology that documented persistent inequities, despite increasing numbers of women (APA, 1995; Task Force on Women in Academe, 2000).

The 1995 report predicted that, in all likelihood, women would continue to compose the majority of the psychology workforce, but it voiced concern that women’s status in the workforce might continue to lack parity with men in opportunities, salaries, recognition, advancement, and leadership (APA, 1995). These inequities were judged to possibly compromise the future strength of the profession. The report provided “warning signals” regarding the decreased attractiveness of certain subfields of psychology and noted that salary declines for psychologists in general—along with restricted opportunity for promotion and reduced autonomy—could

affect future recruitment. APA's (1995) report concluded with the recommendation that psychology "rethink and redesign the profession" (p. 37).

More than 20 years after the 1995 report, the report conveyed here closely tracks the topics and information presented in the 1995 report and finds many similarities. The present update suggests that some of the concerns voiced in 1995 were quite prescient in two primary areas. First, 50 years after the Civil Rights Act, women in psychology continue to experience a manifest lack of parity with men in many critical areas. Women and racial/ethnic minorities are less likely than White men to be enrolled in Doctor of Philosophy (PhD) programs and are more likely to seek Doctor of Psychology (PsyD) degrees. Salaries for women and racial/ethnic minorities, compared to White men, are strikingly lower for those holding PhD degrees and are even more inequitable among graduates of PsyD programs. Those who obtain a PsyD degree also tend to have much greater student loan debt than those from PhD programs, further reducing career mobility and contributing to significant challenges for those professionals. These patterns are exacerbated by more part-time employment among women.

Data and Data Limitations

The current report incorporates data collected by the APA Center for Workforce Studies, federal agencies, and other professional associations. It provides updated information on the participation of women and men in the education pipeline, the workforce, and leadership. As in the 1995 report, we examined selected data to assess the extent to which "career advancement and rewards have paralleled women's increasing representation" in psychology (APA, 1995, p. 33).

A significant weakness in these data (as in 1995) is the lack of detail on intersecting identities, making it difficult to understand fully the complexity of multiple disadvantaged statuses (Cole, 2009). Furthermore, the report continues a binary gender designation because the data were collected in this framework. The Committee on Women in Psychology (CWP) has noted that along with gender, the representation of ethnicity, race, ability, and other classifications is important to fully characterize education, research, and practice in psychology. However, CWP has also recognized that such cross-tabulations do not capture fully the dynamics of intersectionality (Bowleg, 2008; Collins, 2015; Crenshaw, 1991; Else-Quest & Hyde, 2016a, 2016b; Nash, 2011): A truly intersectional model extends beyond the simple formula to add women (or ethnicity).

We also acknowledge that conclusions and recommendations in this report might be different if the report included qualitative accounts involving the experience of stereotype threat and prejudice and related resistance and accommodation in the face of these conditions.

Despite limitations in the data, it nevertheless is the case that the patterns of disparity documented here are substantial. These disparities have been sustained over decades, are reflected in multiple indicators, and have emerged in many different settings. In the remainder of this chapter, separate sections address the sociocultural context of psychology, education and training, employment, and professional activities of psychologists. Summary points address each major section of the report and are bulleted below. Summary points are followed by a section of recommendations for action and a call for a concerted program to remedy long-standing and emerging disparities.

Psychology in Sociocultural Context

Overall, the psychology workforce is still exhibiting patterns predicted in 1995 and confronting many of the issues observed in the earlier report:

- The discipline of psychology exhibits robustness in both science and practice, with growth in research output and large numbers of licensed practitioners in the workforce throughout the United States. The 600 doctoral programs in psychology annually graduate approximately 6,000 individuals with doctoral degrees (PhD and PsyD).
- Psychologists are entering diverse employment sectors. Nearly half of doctoral degrees awarded each year are in health service provider subfields. Of these, 74% are awarded to women, and 22% are awarded to members of racial/ethnic minority groups. Other areas of notable growth include primary and secondary education and government. There has been a decline in employment in postsecondary education, offset by more than doubled employment of psychologists in primary and secondary education (e.g., psychologists in secondary education increased from 5,576 in 1990 to 12,755 in 2012; see Appendix A). Increased concerns about violence, bullying, and intolerance in secondary education suggest an increasing need for psychologists at this level.
- Although the number of psychologists continues to increase (primarily in health services), there has been a reduction in the number of men in psychology, with most growth representing increases in the number of White women psychologists. Approximately 44% of psychologists (79,000) are members of APA; of these members, 65% are women. Approximately 5.5% of psychologists belong to the Association for Psychological Science. Within APA, there has been a doubling in the number of women members between 1981 (23,267 women members) and 2013 (50,697 women members). Over the same years, there has been a 10% decrease in members who are men (see Appendix D, Tables D.1.a and D.1.b). However, despite increased numbers of individuals with advanced degrees in psychology, total APA membership has decreased after peaking in 2008.

Education and Training

We note that education and training traditionally have been structured for those without substantive responsibilities as caretakers who provide for a family. This educational structure often involves institutional requirements for full-time enrollment and uninterrupted pacing of benchmarks and examinations. It is particularly true with respect to the design of internships that require a year of full-time availability and often involve cross-country moves.

Trainees with children face formidable barriers. This is especially so if there are young children who require day care or who have special needs. These burdens fall more heavily on women who are single heads of household. Successfully matching with a placement site may be complicated for many solo parents who benefit from various public assistance programs and access to medical care for their children that is administered and regulated at the state level, further complicating mobility that might be required for an internship. The typical internship structure is a prerequisite to admission to professional standing and imposes heavier burdens on women single heads of household, especially women of color. For instance, data from the U.S. Census Bureau, Housing and Household Economics Statistics Division (2015) reveal that in 2015, 34% of the 11 million Black children in the United States lived with a never-married mother, versus 13% of 18 million Hispanic children, or 7% of 54 million White children. Half the children of any race residing with a never-married mother lived in poverty; this occurred despite the fact that 71% of them had mothers in the labor force.

- Much of the growth in psychology graduate education continues to be due to the influx of women, including (and in some cases, particularly) racial/ethnic minority women. Most growth in psychology is in health service provider areas, and women will compose the majority of the psychology workforce into the foreseeable future. Thus, one may reasonably conclude that the future health of the discipline of psychology and of APA depends to a large extent on the active participation of women and the opportunities available to them, hence the need for parity.
- New doctoral graduates appear to be fairly positive about the job market in psychology despite increasing average student loan debt; decreasing salaries in some subfields; as well as educational costs that appear to disadvantage women, older students, racial/ethnic minorities, and those in PsyD programs. Starting salaries do not mitigate the larger financial burden of obtaining a PsyD compared to a PhD.

Employment of Psychologists

On the whole, the psychology workforce exhibits disadvantageous conditions for women that are similar to well-documented gendered career barriers in the U.S. labor force overall. The data clearly indicate that psychology as a field has not yet achieved gender equity and that it has not moved any faster (and perhaps has moved even more slowly) than other comparable fields:

- Relative to White men, women as a group, as well as men of color, tend to be found in educational and professional service roles versus managerial and scientific roles that are more often occupied by White men. Women additionally are more likely than men to be employed part-time and to be self-employed, with the presence of children a significant factor in the part-time work status for women. A “motherhood penalty” is not unique to psychology and is well documented throughout the U.S. workforce (Park, Smith, & Correll, 2010; Parrott, 2014; U.S. Department of Labor, 2013).
- Salaries for women in general, and particularly women of color, still lag significantly behind salaries for White men, and psychology exhibits lower salaries and greater wage gaps than do some other science fields (National Science Foundation, National Center for Science and Engineering Statistics, 2013). Some data suggest that the gap may have worsened (see Tables 4.12 and 4.13).
- Women’s advancement in academe has improved significantly since 1995 (at least in health service provider subfields), but it takes women 1 year more on average to achieve tenure compared to men, and they remain underrepresented at the associate and full professor levels and in institutional leadership roles. Separate data on these points are not readily available for women and men of color.
- Tenure track employment among college and university faculty has become increasingly vulnerable, and there has been a substantial growth in the creation of nontenure track faculty lines as well as part-time positions. There is some concern that the hiring process for nontenure track positions may be more opportunistic and may not be carefully monitored for civil rights or affirmative action practices. Tenure track status has dramatic implications for salary and lifetime earnings. Across all public institutions, tenure/tenure track faculty earn an average of \$74,856 compared to \$53,188 for faculty who are not eligible for tenure (APA Center for Workforce Studies, 2015).
- About 40% of those involved in the scientific review process in APA journals are women, concentrated mostly as ad hoc reviewers. As of 2013, women represent only 18% of 50 APA journal editors, compared to 11% in 1994. At this rate, it will take more than a century to gain parity.

- In health service provider subfields, more women than men are in service roles, especially independent practice, and women are overrepresented in part-time employment.
- According to the National Center for Science and Engineering Statistics, there are substantial numbers of PhD psychologists currently working in government agencies, approximately 10% of women and 11% of men (see Table 4.1), including approximately 14% of minority and 10% of White psychologists (see Table 4.2). Although these roles may include basic or applied research, they also may include other support and administrative roles.
- There are well-documented gender differences in day-to-day workplace experiences that are known to disadvantage women. One may reasonably assume that these experiences have similar impact for women in psychology.

Professional Activities of Psychologists

Overall, for psychologists involved in the APA, the status of women has improved, but it would be an error to assume that progress is inevitable or that it will occur automatically because “things are getting better”:

- Although women constitute the majority of members in 11 of 56 divisions, they have less overall division representation in 45 divisions compared to men, and accordingly they have fewer opportunities for mentoring and professional socialization, less influence on recommendations for awards and recognition, and fewer lines of input to APA policy.
- There has been steady increase in the number of individuals in APA governance who are women, sexual minorities, of color, or have a disability (intersectionality data not available). In many areas of APA governance, women now have parity proportional to their APA membership. Recall that women compose 65% of APA members, which should be the reference point for parity. Despite progress in some areas, women continue to be underrepresented in the top honors in the association (i.e., Fellow status, prestigious awards). APA staff has shown substantial increases in the presence of women—including minority women—in all job levels and categories in which they previously had been underrepresented, including management.

Recommendations

The inspiration for these recommendations is derived from principles of fairness and social justice. Women now constitute the majority of psychologists, but the gender inequity documented in 1972, 1973, 1995, and 2000 persists (APA, 1995; Astin, 1972; Astin et al., 1973; Task Force on Women in Academe, 2000). Similar issues of education, training, employment, and professional activities are equally relevant to men of color as well as to women as a group. APA represents a substantial percentage of all psychologists and is in position to work intentionally and proactively to address and resolve many of these inequities. Inspired by the APA Decade of Behavior launched in 1998, we call for a similar scope of action for a Decade of Equity Achievement Leadership (DEAL). Specific recommendations are made with respect to (a) wage gap, pay inequity, and underemployment; (b) inequity in the psychology workforce; (c) educational/training opportunities and supports; (d) research; and (e) advocacy.

These recommendations were developed based on the perspective and foresight of the APA Committee on Women in Psychology, Visiting Scholar and Consultant Ruth Fassinger (PhD), the Advisory Committee for this

report, and the APA Directorates. We extend special thanks to Dr. Fassinger for taking a first step in this direction and in generating the DEAL acronym. We highlight here five related areas. Although these recommendations are specific to APA, many also apply to other science fields and community stakeholders. We recommend that APA take action to partner with other stakeholders and professional groups to jointly address some of the following recommendations.

Wage Gap, Pay Inequity, and Underemployment

The field of psychology exhibits lower salaries for women, greater wage gaps, and an increasing average student loan debt (especially for those in PsyD programs) than in other science fields. Salaries for women as a group and for men of color still lag significantly behind salaries for White men. To address these issues, the following recommendations apply:

- APA, in collaboration with other relevant organizations, must advocate for and better support equity in psychology, specific to gender, salaries, recognition, promotion and career advancement, and opportunities for leadership. For this advocacy work to have an impact, it must be supported with current and/or new APA policies focusing on equity. This advocacy should include efforts to increase awareness about the identified gender and ethnicity wage gap issues in psychology.
- Encourage APA accredited programs to address the implicit biases that contribute to lower wages for women psychologists. Wage transparency is an important start to counter the pay gap. If women psychologists cannot discuss their wages with colleagues, they are unlikely to know whether they are earning less than their male colleagues. We also note that flat percentage raises applied uniformly across all faculty or staff do not accumulate in an equitable fashion if the entry or base salaries already differ by gender and race. We additionally point to shifting standards that are applied differentially to women and minorities (Biernat & Kobryniewicz, 1997). These shifting standards may account partially for longer times to promotion or advancement in positions that characterize the career patterns of many women (Biernat & Vescio, 2002).
- For interns and new professionals to seek higher compensation, APA and state board associations should explore methods for reducing the length of time between completion of academic coursework and ability to sit for licensure. Ideally, doctoral candidates should be able to sit for the licensure exam after completing coursework requirements. This policy could benefit candidates with dependents, who are less likely than candidates with no dependents (APA Education Directorate, 2007), to match with an internship site in a Phase I application (73% match rate for one or more dependents vs. 81% for no dependents). Although addressing the shortage of internship sites should remain a priority, candidates who do not match in Phase I could use the year without internship to prepare and pass the licensing exam and incur less lost time toward becoming full wage earners.
- APA should support special task forces to address factors that appear to be linked to women's overrepresentation in part-time (vs. full-time) employment (e.g., contingent faculty in higher education). Developing model plans appropriate for programs and institutions of differing size that enable access to high-quality early child care might be one product of such task forces.
- APA should support legislation and policy that would increase payment for direct services, which are provided primarily by women. This should include policies and funding systems that encourage psychologists to provide services to a more diverse and marginalized population as well as attention to a wider range of psychopathology.

- APA should encourage institutions with APA accredited programs to develop financial planning strategies and to provide professional development training focused on decreasing the rate of debt incurred for all students participating in graduate programs with special attention to women and minorities who are more burdened by debt. This should include attention to how intersecting identities affect the loan repayment process. Creating opportunities for student financial support should be a part of this process.

APA should create a multi-institutional task force to develop approaches to address multiple psychology gender wage gap issues identified in this report, including the following: (a) larger gender wage gaps in older cohorts of psychologists, (b) underrepresentation of women in academic leadership positions, (c) underrepresentation of women at the full professor rank, (d) slow career paths and revolving door effects that tend to keep women clustered at the assistant professor level, and (e) overrepresentation of women in part-time versus full-time employment.

Inequity in the Psychology Workforce—Leadership Roles/Opportunities

Although women earn more doctoral degrees than men, and represent an increasing percentage of the membership in APA, there are areas of gender inequity within APA itself. Much of the relevant data on these points were derived from the APA Directory and were compiled by the Center for Workforce Studies. We focus here on recognition of competence and merit and on leadership roles and opportunities. We identify member participation in divisions as an important locus in redressing these issues.

Recognition of competence and merit is key to the perceived legitimacy of members to hold standing as scholars, educators, and practitioners entitled not only to be present but also to shape current and future directions. Status as a Fellow is one mark of competence. In 2013, women constituted approximately 58% of APA members (see Appendix D, Table D.1.a). Among members eligible for recognition as Fellows,² 3.3% of women held the honor Fellows, whereas 7.8% of men held the designation of Fellow. Lest anyone dismiss this discrepancy as merely the matter of a few percentage points, the relative odds³ in favor of men were 2.33 and translates to a z score of 27.65 ($p < .001$). The percentage of Fellow status among non-White minority members was proportional (see Appendix D, Tables D.1.b and D.1.c). The number of self-identified transgender members (<10) was too small to make an inference.

Similarly, receipt of a major award or other honor by APA has traditionally recognized men. These include APA-wide awards for international and humanitarian efforts, in science, practice, and advocacy as well as awards for lifetime achievement. Each major board and committee recognizes individual accomplishment for differing accomplishments. Recipients are presented at a formal ceremony during the APA annual convention. For example, in 2015, the Board of Educational Affairs recognized accomplishment in three areas: Distinguished Contribution to education and training, Distinguished Lifetime Contribution to education and training, as well as a graduate student prize for research. All three awards went to men. This is notable because many of the areas for recognition in the education and training in practice areas have substantially more women than men. On the science side, the Board of Scientific Affairs annually designates three Distinguished Lecturers. In the past decade, approximately 40% of these honors went to women; however, in 4 years, including 2016, all

2 Membership may be as an Associate, Member, or Fellow. Fellows are selected from regular members; associates are not eligible for Fellow status.

3 Relative odds, z score, and significance were calculated with Medcalc (https://www.medcalc.org/calc/relative_risk.php).

Distinguished Lecturers were men, whereas the only two awards that went to women occurred in 2013 (APA, 2016).

Participation in governance is another area we considered. There are 595 seats associated with governance; these include the APA Council of Representatives (172 seats) as well as membership on key boards and committees associated with each Directorate (Board of Directors, Convention, Education, Finance, Membership, Professional Affairs, Public Interest, and Science). Demographic characteristics of governance members are collected periodically through volunteer surveys. Recent surveys indicate that approximately half of governance members are women, somewhat less than the 65% of APA members who are women. Among the 125 presidents of APA through 2016, only 15 have been women. As presidents, men, more than women, have had the opportunity to establish presidential initiatives and task forces that often define future directions of the field. As presidents, men, more than women, have chaired the business of the Council of Representatives and of the Board of Directors.

We see division initiatives and division membership as key elements for efforts to redress many of these issues. Participation in APA divisions is an opportunity for professional development and often is the entry point for collaborative scholarship and general career development. This is where mentoring and professional collaborations can emerge. Shared expertise and the opportunity to learn from more experienced professionals within a division framework are important aspects of professional socialization. Of the 56 divisions of APA, 11 have a majority of women members. These include most of the divisions designated by age groups (pediatric, child, adolescent, adult, and general developmental as well as those focused on caring and service [e.g., trauma]). Two of these divisions are dedicated to issues of particular relevance to women (Division 35) and to culture, ethnicity, and race (Division 45). Despite the value of division membership, only 6.2% of all ethnic minority members indicated membership in any division (see Table 5.1 and Appendix D, Table D.1.b).

Whereas women constitute a majority of members in 11 divisions, men constitute the majority of members in all other divisions. Thus, men shape the priorities, direction, and opportunities within most divisions; give and receive mentoring; determine slates for elected leadership positions; set priorities for workshops; and shape APA convention programming associated with the division. Men also have the majority role in determining awards for division recognition and merit and provide most of the editorial recommendations for what gets published in the particular field. Division membership also factors into the number of APA Council seats held by a division. In a cascade of influence, members of Council, many of whom are elected by divisions, traditionally have selected members of APA Boards and Committees. To the extent that most divisions have a majority of membership that is male, men are in a position to heavily shape APA policies and practices set on the floor of Council and to shape membership on boards and committees. We note that governance plans have called for the general membership to elect individuals to seats on boards and committees.

- We recommend that the APA make resources available to division membership chairs that would enable targeted membership recruitment efforts and support for convention and midwinter programming. This includes outreach, mentoring, and visible participation for women and marginalized groups, including members with a disability as well as ethnic and racial minorities.
- Designation as a Fellow is an indicator of notable contributions and accomplishment that traditionally has overlooked women. Such nominations originate within divisions. In recent decades, this has changed somewhat for the better; however, inequities remain. Therefore, APA needs to continue to make a concerted effort to ensure that the contributions of women and minorities to psychology are rightfully recognized. When major awards and fellowships are announced, calls should clearly encourage applications from these groups.

- APA should continue to work to maintain the equity that has been achieved in women's participation in governance at APA. Participation in governance is a way to learn about and to shape psychology as an educational, practice, and science organization of social relevance. Participation in governance offers opportunities to develop and participate in advocacy for social justice in the public interest. Membership on any of these governance bodies creates a voice for many different constituencies.

Educational/Training Opportunities and Supports

Overall, most students now in the education pipeline are women, and most are entering the workforce in health service provider roles. Although entry to health service provider roles is clearly delineated, pathways for other meaningful careers—for example, secondary education or government settings—are likely to remain nebulous from the perspective of students. In any case, sound habits of successful psychologists are relevant to virtually every career path in psychology, regardless of specialty. Recommendations with respect to education and training opportunities address (a) strategies and programming to better prepare doctoral students for career success in general and (b) restructuring of internship requirements.

- APA should support efforts to expose students to psychology starting in high school and community college as well as to encourage work foundational to a bachelor's degree. Students should learn about psychology's multiple career paths, diverse role models, mentors in psychology—including health service provider and science (e.g., cognitive, neuropsychology)—as well as organizational management and research opportunities within government and private enterprise. It could be useful for these students to see examples of psychologists discuss career paths—for example, in a pamphlet, book, or video of individuals discussing their career paths and current activities. Such discussions should include training requirements, student loan debt, and likely salaries. A curriculum that facilitates and credits community engagement and that structures practicum placements and internships in public and private sector settings featuring research and science may help establish among students a broader perspective as to the scope of psychology.
- APA should encourage accredited graduate programs and internships, as well as postdoctoral settings and all other training settings, to provide professional development on topics such as private practice management, negotiation (e.g., of work assignments, administrative support, capital equipment, support for visiting colleagues, voice in admission of like-minded graduate students, salary, options for salary supplements, and general criteria of what counts as merit), work/life balance, microaggressions, supervising others, becoming an editor, and student loan repayment.
- APA should encourage psychology departments to provide opportunities for students and early career psychologists to serve in leadership roles and to meet with psychology leaders (e.g., deans, chairs, center directors, practitioners, division chairs, journal editors, and council members). These settings also could bring awareness to multiple career paths in research settings within government agencies or departments at state and federal levels (e.g., in settings for energy, environment, health, justice, management, and budget policy and practice).
- Given the persistent lack of gender equity for journal editors, APA should expand convention programming on the pathway to editorship, the logistics of being an editor, and how to identify and pursue editorial opportunities. This should include components specific to women, minorities, and other classes that may face added barriers and fewer resources to enable such career choices. Targeted training could include videos with diverse individuals discussing their career preparation for editorships, their application process, how

they created or modified an editorial board, creating theme issues, negotiating with publishers, and similar topics.

- APA should create opportunities for women, particularly women in underrepresented groups, such as ethnic/racial minorities, women with disabilities, and sexual minorities, to gain the skills needed to participate in scientific and managerial roles.

APA should encourage accredited programs to

- a. train students on grant writing and accessing funding streams to support research with responsiveness to the research and interventions of interest to women and minority participants;
 - b. create university/college/leadership programs designed to facilitate inclusiveness for women, minority students, and individuals with disabilities; and
 - c. provide mentoring with respect to career planning and leadership.
- APA accredited academic programs and clinical training sites should ensure education and training of staff related to gender-based prejudice and discrimination, sexual assault, problem pregnancies, and the intersection of gender with other minority statuses.
 - APA accredited academic programs should be encouraged to offer additional support to decrease cost of graduate education (child care, housing, etc.).
 - There is a need to consider developing a 2-year part-time internship option for candidates who, because of family responsibilities, cannot afford to complete a low-paying, 1-year, full-time internship. Additionally, APA needs to rethink the penalty placed on programs that allow students to take more than 7 years to complete degrees. A significant percentage of these candidates may be single heads of household who face limitations beyond those of a typical student.
 - APA needs to identify funding streams for clinical training sites to offer trainees and interns assistance with housing and child care support services.
 - APA needs to encourage regionally accredited institutions to offer career support services to assist women alumni in their pursuit of employment following degree completion.
 - APA needs to develop multiple-level mentorship programs for students, interns, early-career professionals, and midlevel/senior professionals that intersect gender and other identity factors (e.g., ethnic identity; disability; lesbian, gay, bisexual, and transgender status; socioeconomic status).
 - APA needs to provide all students at the undergraduate level with mentoring to consider multiple types of psychology degrees, including PhD, master's, and professional degrees (i.e., PsyD). Outreach (i.e., fact sheets, blogs) to undergraduate programs from APA divisions and committees focused on women's issues is one way to offer current information and mentoring.
 - APA needs to be proactive in addressing gender and race disparities with respect to associate and senior journal editor positions. Beyond extolling personal gratification, mentoring and recruitment should also provide first-hand information and examples on options for editorial initiatives, how to establish an editorial board, logistics, and what may be negotiated with host institutions as well as with publishers.

- APA should create an award at the presidential level to recognize one APA accredited academic program annually that demonstrates laudable efforts to institute any of the recommendations listed in this section. For instance, the APA's Education Directorate gives a yearly award to recognize an innovative graduate program; a similar award could be developed to recognize a program that makes significant efforts to target the issues addressed in this report.

Research

Findings of this report indicate the need for more research in critical areas. Some of these areas include identification of contextual factors, inclusion and focus on culturally diverse individuals, use of an array of research methodologies including qualitative approaches, as well as educational and work-life experiences.

- The Center for Workforce Studies should identify data needs to address the recommendations in this report and support efforts to collect, analyze, and report such data. Ideally, these data should be capable of distinguishing individual from contextual factors.
- Overall, more attention to data collection on diverse individuals is needed to understand how the changing composition of gender in psychology is affecting diverse groups. Data are needed that can contribute to understanding how the trends observed in this report—particularly in wage gaps, leadership roles and opportunities, and education and training decisions—affect women of color, White women, and men of color in comparison to White men. The database should include options for intersecting identities that involve multiple minority classifications.
- Qualitative accounts should be included that involve the experience of gender inequity, particularly with respect to education and employment, wages, and leadership roles. Accounts should also investigate those factors that influence the decision-making process about education, employment, and leadership opportunities.
- Data on the gender composition of the pipeline for psychologists should be identified, including (a) the percentage of psychology graduate students who were undergraduate psychology majors, (b) career paths of community college and undergraduate psychology majors, (c) career paths of master's-level psychologists, and (d) the career paths of those entering doctoral training and midcareer to better understand the pipeline into doctoral-level psychologists and career advancement. Data should be collected in a way that can provide a clear picture of pipeline issues:
 - a. There are well-documented gender differences in actual educational experiences that disadvantage women, although the presence or potential impact of such differences in psychology is not known at this time due to lack of available data. Such experiences should be considered when investigating the pipeline for psychologists. Field research, qualitative designs, and community action projects may be particularly useful for identifying factors contributing to poor educational experiences and leaks in the psychology pipeline.
 - b. Individual (e.g., ethnicity, gender, ability, family status) and context (e.g., status of the economy) factors that contribute to decision-making processes regarding educational (undergraduate, professional certificates, master's, PhD, or PsyD) and career (practice vs. academia or other settings; health service provider vs. other fields) choices should be identified, including anticipated student loan debt, activities, and hours worked.

- APA should identify why greater numbers of women are opting for master's and professional degrees than men, who tend to opt for PhD degrees; what factors contribute to a decrease in women entering the subfields of experimental and comparative psychology; and how these trends might be reversed.
- APA should identify individual, institutional, and societal factors that influence leadership in science by (a) promoting research on effective interventions to increase leadership skills in underrepresented women and to facilitate mentoring and support for women in leadership positions, (b) advocating for funded research on effective interventions and factors that influence decision making through APA grant mechanisms, and (c) promoting funding for research on effective interventions and factors that influence decision making through the science directorate.
- APA should examine the congruence of the mental health needs of the nation and the patterns of employment and take steps to increase the likelihood that the pipeline of practitioner trainees are prepared to address the needs that exist. This may include considering reimbursement practices for PhD/PsyD psychologists and student loan management. Similarly, with increased interdisciplinary nature of science, it is important to encourage psychology graduate students to learn the skills necessary to conducting successful research in the real world. Given that women are less likely to receive mentorship at all levels, APA's understanding of these issues and workforce management strategies would be very useful in ensuring gender equity.
- Given the substantial current and projected growth in health services fields of psychology, it is critical to understand the drivers behind those areas of growth, important subfields, and the representation of diverse women and men in those fields. This is particularly important given the need for appropriate treatment of diverse populations by individuals with cultural and gender competence.
- Because stress, exhaustion, and burnout for women working in health provider agency settings are likely linked to some of the wage inequities identified, it is important for APA to support efforts to increase awareness and to identify strategies to address this issue.
- Additional research is needed that clarifies how and if the psychology workforce increase in part-time work for both men and women is attributable to the same trend observed in other fields—for example, where the shift is attributable to increasing reliance on low wages, low skills, and high turnover rates to cut operation costs. Research should also clarify whether the same family obligation issues that appear to push more women than men in the labor force to take part-time positions are similar for women psychologists. Research should address whether women and men psychologists working part-time positions are doing so deliberately and, if so, whether they are content with the option: Do women in full-time positions feel more pressured than men to assume part-time work when they have children? Do employers of psychologists with more generous benefits for men and women raising children have fewer workers move to part-time positions?
- Following analyses of the U.S. labor force, which reveal that in addition to women, minorities are disproportionately stuck in part-time jobs with stunted career paths, it is important to pursue research that identifies how this trend might also be affecting minorities of all genders in the psychology workforce.
- To better understand how the large number of barriers to women's success in science-related fields affects the psychology workforce, some important factors to investigate might include the following: women's greater teaching and service burdens, women's lower levels of grant funding, gender stereotypes that prevent women's advancement, bias in performance evaluations and higher productivity demands for women, gender bias related to classroom experiences, lack of support and double standards for managing multiple

roles, mentoring and sponsorship, workplace politics and climate (including experiences of harassment and microaggressions), and effects of the intersection of gender with other important identities and status variables (e.g., race/ethnicity, disability, social class, sexual orientation, transgender and gender nonconforming identity, and age/cohort). Future data collection can help us more fully understand the challenges that female academic psychologists face.

- Gender differences in work styles should be investigated. For example, research suggests that women (relative to men) tend to seek out more uncommon areas of research, may work more carefully and for longer periods of time before releasing their results, and may be more likely to spend time disseminating their work to relevant audiences (Hill et al., 2010; National Academy of Science, 2006; National Research Council, 2009).

Advocacy

Dissemination of this report will help to mobilize advocacy to create change. Specifically, APA should make results of this report available to its membership, to teachers of psychology, and to the general public. Opportunities for dissemination to increase advocacy might include social media, peer-reviewed literature, lay publications, and other relevant sources.

- APA, in collaboration with other relevant organizations, must advocate for and better support equity in psychology, specific to gender, salaries, recognition, promotion and career advancement, and opportunities for leadership. For this advocacy work to have an impact, it must be supported with current and/or new APA policies focusing on equity.
- APA should collaborate with other organizations that support students and trainees (e.g., American Association of University Professors, National Postdoctoral Association) to ensure psychology is at the table and can provide scientific expertise associated with issues important to psychologists, such as child care, benefits, and resources for parents in graduate school and postdoctoral training; rising cost of tuition; and resources on student loan management. APA should also continue to work with the federal government regarding federal funding for student, trainee, and early career psychologists (e.g., National Research Service Awards, National Health Service Corps) and student loan repayment (e.g., National Institutes of Health Clinical Researcher Loan Repayment Program) for both scientists and practitioners.

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Appendices are online at <http://www.apa.org/women/programs/gender-composition/index.aspx>).



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