

# Workforce Analysis of Psychological Practice With Older Adults: Growing Crisis Requires Urgent Action

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As the proportion and sheer number of older adults in the United States continues to increase, we need to plan for their behavioral health care. Access to accurate data about current workforce characteristics in psychology can provide essential information to inform workforce planning. In this paper, we present results of the American Psychological Association's Center for Workforce Studies survey of psychologists, with a focus on older adults. Participants ( $N = 4,109$ ) were doctoral psychologists identified through state licensing boards. Only 1.2% of those surveyed described geropsychology as their specialty area, although 37.2% reported seeing older adults frequently or very frequently, most often from the specialties of rehabilitation psychology, clinical neuropsychology, and clinical health psychology. Frequent providers of aging services were more likely to be older, nonethnic minority, working in independent practice as their primary work setting, and self-employed as compared to other respondents. In addition, frequent providers of services to older adults were more likely to be in practices colocated with medical professionals and to accept Medicare as payment. Low reimbursement rates were cited as a reason for not accepting Medicare by those who did not. There was strong interest in further education in aging from all psychologists in areas including adjustment to medical illness/disability, depression, bereavement, dementia, anxiety, psychotherapy, and caregiver stress. The results of this survey suggest a continued urgent need to train psychologists across subfields in foundational geropsychology competencies that all psychologists should possess to be prepared for the rapidly growing and increasingly diverse population of older adults.

*Keywords:* workforce, aging, geropsychology

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For psychology to remain a relevant health care provider, education and training efforts must align with current and future population changes, such as population aging (Hoge, Karel, Zeiss, Alegria, & Moye, 2015). Due to a confluence of declining mortality and fertility, older adult population rates are exploding worldwide, especially in developed countries, and this trend will continue for some time to come. From 2000 to 2060, the aging population in the United States will triple in size (see Figure 1), with the number of adults aged 65 and older to exceed the number of children (< age 18) by 2040 and beyond (Colby & Ortman, 2014).

The challenge of contrasting general population projections with the current and projected psychology workforce has been a problem which has bedeviled the discipline for some time. Just recently, the Center for Workforce Studies (CWS) of the American Psychological Association (APA) released its findings of a major survey of the psychology workforce (American Psychological Association, 2016a), along with population specific fact-sheets (American Psychological Association, 2017a). In this paper, we summarize those findings relevant to older adults and present further population specific analyses which we interpret in the context of training and education. First, we summarize existing literature on behavioral health care and the workforce that provides health care services to older adults, next we present CWS workforce projections, and finally we present population specific analyses.

### Behavioral Health Conditions in Older Adults

Many older adults experience behavioral health and substance use problems, including lifelong problems and those which first occur in later life, with estimated 2010 prevalence of disorders among community-residing adults aged 65 and older ranging from

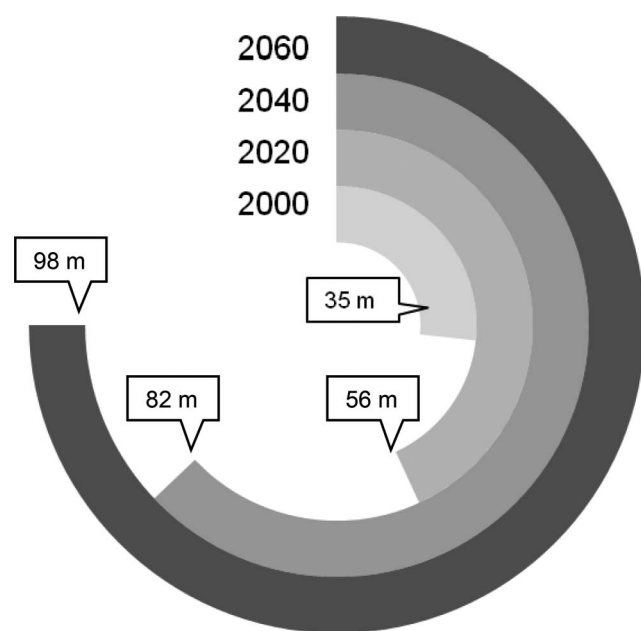


Figure 1. Number of persons age 65 + in the U.S. population (in Millions) 2000–2060 in 20-year intervals. Note: Figure based on U.S. Census Bureau (Colby & Ortman, 2014).

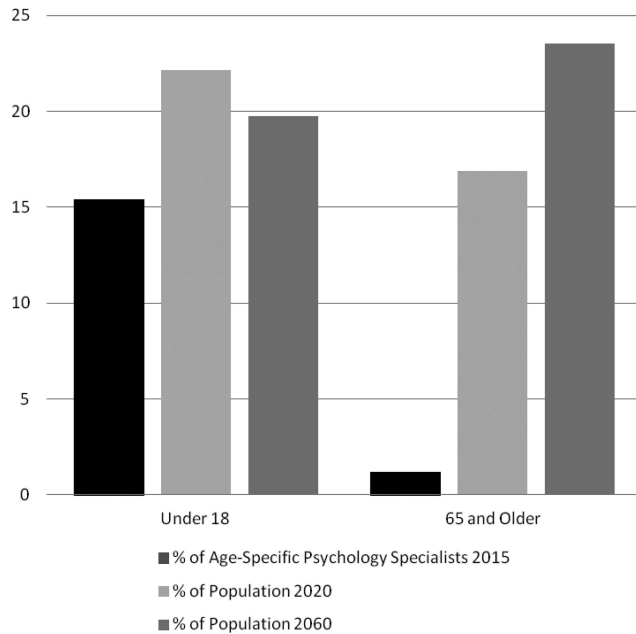
6.8–10.2% (considering depressive disorders, panic disorder, agoraphobia, social phobia, generalized anxiety disorder, posttraumatic stress disorder, and substance use conditions). When expanding estimates to include also bipolar disorder, schizophrenia, behavioral and psychiatric symptoms in dementia, and mental disorders among nursing home residents, the 2010 prevalence estimates rise to 14–20%. Even greater numbers of older adults struggle with subclinical depressive or anxiety symptoms or at-risk drinking or drug use (Institute of Medicine, 2012). Undertreatment of behavioral health concerns in older adults, and in particular of suicide risk, remains a serious ongoing concern. In 2014, men aged 75 and older had the highest suicide completion rate of 38.8 per 100,000 people, compared to 26.6 for men ages 65–74, 29.7 for ages 45–64, and 24.3 for ages 25–44 (Curtin, Warner, & Hede-gaard, 2016). Increasing rates of suicide among middle-aged men and women over the past 15 years pose significant concern for behavioral health of those soon entering old age (Piscopo, 2017).

Contrary to misbeliefs held by some, many behavioral health conditions occurring in older adults can be effectively treated with evidence-based assessment and treatment approaches (Karel, Gatz, & Smyer, 2012; Segal, Qualls, & Smyer, 2018). Older adults benefit from many of the same psychological assessment and treatment approaches used for adults of all ages, for example treatment of depression. In addition, older adults benefit from assessment, intervention, and consultation for concerns more common in older populations including but not limited to bereavement, role transitions, caregiver and family stress, adjustment to and potentially poor treatment of multimorbidity, cognitive changes, sexuality and sexual health (American Association of Retired Persons, 2010), transitioning to a retirement community or skilled nursing facility, and death and dying (American Psychological Association, 2014; Segal et al., 2018). For simplicity, in this paper we will refer to all of these services as behavioral health care.

### Behavioral Health Care Providers for Older Adults

Analyses have shown consistently that there are not sufficient numbers of geriatric trained health care providers (Institute of Medicine, 2008) nor behavioral health care providers (Institute of Medicine, 2012) to meet the growing numbers of older adults (Hoge et al., 2015). Previous surveys, limited in size and focusing on APA members (rather than the broader population of psychologists), estimated 3–4% of psychologists describe their specialty as geropsychology (American Psychological Association, 2010; Qualls, Segal, Norman, Niederehe, & Gallagher-Thompson, 2002). In contrast, the U.S. Census Bureau estimates 14% of the population is comprised of older adults, which will grow over time (see Figure 2), creating a substantial workforce gap in providing care for older adults. A significant minority of psychologists (39%) have stated they work occasionally with older adults, but we know little about their specific training backgrounds, competencies, and exact types of services provided (American Psychological Association, 2010).

A new report examines current and projected psychologist supply and demand from 2015 to 2030 (American Psychological Association, 2018). Demand was determined by current patterns of service utilization and projected population demographic changes, whereas supply was determined by the number of licensed psychologists active in the workforce, new entrants, workforce participation patterns, and migration patterns. Overall, from 2015 to



*Figure 2.* Workforce gap in psychology based on population proportions. Note: Figure based on U.S. Census Bureau (Colby & Ortman, 2014), and APA Center for Workforce Study data.

2030, the national demand for psychologists is projected to increase to 101,120 Full-Time Equivalents (FTEs), which reflects an increase of 5,940 FTEs (6%) from the demand level in 2015. The largest increases in demand is related to individuals 65 years and older (5,790 FTEs), with an increase of 2,330 FTEs from ages 65 to 74 years, and an increase of 3,460 FTEs from ages 74 years and older (with the total demand partially offset by decreased demand by adults aged 45 to 64). In 2030, the projected demand for psychologists from ages 65 years and older is 16,540 FTEs, with 8,190 FTEs from ages 65 to 74 years, and 8,350 FTEs from ages 75 years and older. States with the highest demand for psychologists from the older adult population include California (1,990 FTEs), Florida (1,390 FTEs), Texas (1,230 FTEs), New York (850 FTEs), and Pennsylvania (750 FTEs).

### Developing a Field of Professional Geropsychology

Over the past few decades, the knowledge and skill basis for effective psychological practice with older adults has been articulated by specialists in geropsychology (American Psychological Association, 2014). The “Pikes Peak Model for Training in Professional Geropsychology,” developed following a national training conference in 2006 (Knight, Karel, Hinrichsen, Qualls, & Duffy, 2009), delineates attitude, knowledge, and skill competencies for geropsychology practice (Knight et al., 2009). The Pikes Peak model is the foundation for the Geropsychology Knowledge and Skill Assessment Tool (Karel, Emery, Molinari, & the CoPGTP Task Force on the Assessment of Geropsychology Competencies, 2010), which supports self-assessment of professional competencies for work with older adults. These competencies include knowledge of normal adult development and aging; medical illness, neurocognitive disorders, and psychopathology com-

mon in late life, and their interactions; and evidence-based assessment, treatment, and consultation with older adults, their families, and care systems. As of 2010, professional geropsychology is a recognized specialty by the American Psychological Association (APA), and as of 2013, by the American Board of Professional Psychology (ABPP). As of January 2018, the Council of Professional Geropsychology Training Programs (CoPGTP) lists 16 doctoral programs in psychology that provide geropsychology training consistent with the Pikes Peak Model (see <http://copgtp.org>), 16 internship programs, and 15 postdoctoral training programs in geropsychology.

In view of the projected increased demand for psychologists to work with older adults, this paper examines current practice patterns with the older adult population and interprets them through the lens of training and education. We examine practice patterns between those psychologists working frequently with older adults versus those who do not, while considering demographics, specialty training, and insurance, as well as educational interests.

### Method

The 2015 APA Survey of Psychology Health Service Providers collected information about demographic and educational characteristics, employment and practice patterns, team-based care, and cultural competency of licensed psychologists. Additional results and methodological details have been published in a technical report (American Psychological Association, 2016a).

### Sample

The target population for the survey was U.S.-licensed, doctoral-level psychologists. State licensing board lists from 50 states and the District of Columbia were collected. APA Center for Workforce Studies staff identified doctoral-level psychologists by the license type and license status records reported by each state. These records were standardized, merged, and de-duplicated by staff in APA’s Information Technology Services. Records were matched by first and last name, e-mail address (where available), and mailing address.

A total of 100,305 distinct licensed psychologists with doctoral degrees were identified. Of these, 45,595 individuals had identifiable e-mail addresses. The majority of e-mail addresses were obtained from APA member records and state licensing board records. Other sources of e-mail addresses, such as ABPP rosters, were also used. A total of 8,914 e-mail messages were undeliverable, reducing the number of delivered e-mails to 36,681. A total of 5,325 individuals completed the survey, yielding a response rate of 14.5%.

### Measures

**Core survey.** The survey consisted of a core survey given to everyone, with additional modules on subtopics such as cultural competency as indicated by survey responses or randomization. Items were developed based on a previous APA survey of health service psychologists (American Psychological Association, 2010) and the Health Resources and Service Administration (HRSA) minimum data set for psychologists (Health Resources and Services Administration, 2017) with input from select APA staff and

governance groups. All respondents provided information on demographic and educational characteristics, licenses, practice and employment characteristics, conditions treated (e.g., anxiety, depression, sleep-wake disorders), and populations served (e.g., patient demographics).

**Geropsychology module.** Psychologists who reported providing services to adults age 65–79 and/or adults age 80 or older “occasionally,” “frequently,” or “very frequently” were directed to a geropsychology module with questions on hours spent in specific assessment, treatment, and consultation activities with older adults, as well as experiences with Medicare and desired topics for education. A subsample who indicated they worked with other licensed health professionals were asked to indicate which health professionals were in their setting. The geropsychology module was pilot tested and refined by geropsychology content experts prior to distribution.

## Procedures

Potential respondents received a prenotification e-mail message and were informed of the forthcoming survey and its purpose. One week later, potential respondents received an e-mail message with a unique survey link. A maximum of three reminder e-mails were sent approximately one to two weeks apart to those who had not completed the survey. At the beginning of the survey, respondents were informed that the purpose of the survey was to gather information about the psychology workforce, that participation was voluntary, and that data would only be reported in aggregate form. As an incentive for participation, respondents who completed the survey were entered into a random drawing for one of 10 iPad tablets.

## Statistical Analyses

Data analyses were primarily descriptive in nature using frequency (for nominal data) and means (for interval data) reports, with group comparisons using Student’s *t* tests and chi-square analyses. Group comparisons of the entire survey compared those who saw older adults “frequently” or “very frequently” with those who saw older adults “occasionally,” “rarely,” or “never.” Group comparisons for the geropsychology module compared those who saw older adults “frequently” or “very frequently” to those who saw older adults “occasionally,” as those who saw older adults rarely or never, did not complete the geropsychology module. Missing data and outliers were excluded at the item level.

## Results

### Participants

Demographic characteristics for respondents by reported frequency of serving older adults are provided in Table 1. Across the full sample most respondents were female (59.2%); the median age was 58 years, while the mean age was 55.7 years. Most respondents identified as White/Caucasian (87.8%). Racial/ethnic minorities accounted for 12.2% of the respondents and 90.2% of respondents identified as heterosexual/straight. When assessing disability status, 5.8% of respondents indicated that they had at least one disability. Complete sample characteristics are described in the full

report (American Psychological Association, 2016a). About 75% were APA members and 25% nonmembers.

### Frequency of Services to Older Adults

Within the core survey sample ( $N = 4,115$ ), respondents stated their frequency of providing services to older adults ages 65–79 as: never (20.4%;  $n = 839$ ), rarely (17.8%;  $n = 734$ ), occasionally (24.6%;  $n = 1,014$ ), frequently (24.1%;  $n = 992$ ), and very frequently (13.0%,  $n = 536$ ). Of the 37.1% seeing older adults frequently or very frequently, 75.1% ( $n = 1,148$ ) provided services to the “younger old” only, ages 65–79. In contrast, less than 1% (0.1%,  $n = 3$ ) provided services to the “oldest old” only (80+), and 24.7% ( $n = 377$ ) provided services to younger and older old adults. In total, only 9.2% ( $n = 380$ ) of the full core survey sample reported providing services to adults age 80 or older frequently or very frequently.

### Specialty Designation

Only 1.2% of respondents ( $n = 48$  of 4,115) identified geropsychology as a primary specialty. The most commonly endorsed specialty area was clinical psychology (45.2%), followed by child/adolescent psychology (15.4%) (see Table 2). Outside of geropsychology, psychologists within three specialties reported high rates of working with older adults frequently or very frequently: rehabilitation psychology (65.3%), clinical neuropsychology (59.9%), and clinical health psychology (60.3%). Within all other specialties, at least one third of respondents reported working with older adults frequently/very frequently except for the following five specialties: (1) forensic, (2) police and public safety, (3) organizational/business, (4) child/adolescent, and (5) school psychology.

### Comparisons of Psychologists by Frequency of Service

Next, we focused on potential differences between psychologists who saw older adults age 65 or older frequently (i.e., reporting frequently or very frequently) versus those who saw older adults infrequently (never, rarely, or occasionally) in the full sample. Frequent providers of aging services were more likely to be older, nonracial/ethnic minority, working in independent practice as their primary work setting, and be self-employed as compared to respondents who never, rarely, or occasionally provided services to older adults (see Table 1). Gender, sexual orientation, disability status, type of doctoral degree, secondary work setting, primary and secondary work hours per week, and practice plans in the next 12 months did not differ significantly between those who saw older adults frequently versus infrequently. Of psychologists who indicated they worked with other licensed health professionals, those who worked frequently with older adults were more likely to describe practices that were colocated with medical professionals such as physicians,  $\chi^2(3, 2708) = 62.76, p < .001$  and nurses,  $\chi^2(3, 2708) = 28.91, p < .001$ .

In addition, psychologists who worked frequently or very frequently with older adults were more likely than those who did not to report treating 17 of 20 treatment areas, namely: anxiety, obsessive–compulsive, depression, trauma, bipolar, personality, substance-related, neurocognitive, disruptive/impulse control, somatic, sleep-wake, schizophrenia, sexual, dissociative, medication-



Table 1  
*Demographic and Practice Characteristics in the Total Survey Sample (N = 4,115)*

	Total sample		Frequency of services to older adults				$\chi^2$	df, N	p
			Never/rarely/occasionally		Frequently/very frequently				
	n	%	n	%	n	%			
Degree									
PhD	3,148	76.5	1,968	76.1	1,180	77.2	1.07	(2, 4115)	.59
EdD	98	2.4	60	2.3	38	2.5			
PsyD	869	21.1	559	21.6	310	20.3			
Age									
Under 35	230	6.2	161	6.9	69	5.0	98.31	(4, 3737)	<.001
35–44	699	18.7	502	21.4	197	14.2			
44–54	742	19.9	525	22.4	217	15.6			
55–64	1,169	31.3	687	29.3	482	34.7			
Over 64	897	24.0	471	20.1	426	30.6			
Gender									
Female	2,305	61.0	1,474	62.2	831	59.1	3.39	(1, 3776)	.97
Male	1,471	39.0	897	37.8	574	40.9			
Racial/ethnic minority status									
Non-minority	3,277	86.7	2,026	85.3	1,251	88.9	9.75	(1, 3781)	.002
Minority	504	13.3	348	14.7	156	11.1			
Sexual orientation									
Heterosexual	3,383	92.6	2,106	92.0	1,277	93.4	2.33	(1, 3655)	.12
Gay, Lesbian, Bisexual	272	7.4	182	8.0	90	6.6			
Disability status									
Disability - Yes	210	5.1	130	5.0	80	5.2	.09	(1, 4115)	.77
Disability - No	3,383	92.6	2,457	95.0	1,448	94.8			
Primary work setting									
Private practice	2,003	49.3	1,203	47.2	800	52.9	66.53	(2, 4061)	<.001
Organized human service settings	996	24.5	555	21.8	441	29.1			
Other settings	1,062	26.2	790	31.0	272	18.0			
Employment arrangement									
Self-employed	1,981	48.8	1,176	46.2	805	53.2	20.01	(3, 4058)	<.001
Salary	1,777	43.8	1,180	46.4	597	39.5			
Hourly	153	3.8	98	3.9	55	3.6			
Other employment	147	3.6	91	3.6	56	3.7			

Note. Missing values were excluded at the item level prior to analysis. Percentages are of percents within frequency of providing services to older adults.

induced movement disorders/other adverse effects of medication, other conditions, no mental or physical health diagnoses. The exceptions were neurodevelopmental and elimination disorders, which were more likely a focus of treatment for psychologists who did not work with older adults frequently or very frequently. Also, there were no differences between the groups in the frequency of treating feeding and eating disorders, gender dysphoria, and paraphilic disorders.

### Findings From the Geropsychology Module Sample (n = 2,542)

Next, we examined responses for those psychologists who stated they provided services to older adults age 65 or older occasionally, frequently, or very frequently who completed the geropsychology module. These analyses did not include psychologists who saw older adults rarely or never as these respondents did not complete the geropsychology module.

**Insurance coverage.** Psychologists reported percent of total caseload by type of insurance. Those who worked frequently or very frequently with older adults were more likely to see patients who had Medicare health insurance (31.9% vs. 15.7%,  $t(1843) = -15.2, p <$

.001, or through the Veterans Health Administration (50.2% vs. 10.4%,  $t(613) = -12.5, p < .001$ ), than those who worked occasionally with older adults. Those who worked occasionally with older adults were more likely to see patients who had private insurance, Medicaid, or other government insurances. Two thirds (65.6%) of the geropsychology module sample participated in Medicare (see Table 3). For those who did not, the most common reason reported for not participating was that the reimbursement rates are too low. For psychologists who did accept Medicare payment, 39.6% reported an increase in Medicare clients seen over the past three years.

**Educational interests.** Participants who worked with older adults frequently or very frequently expressed greater interest in further education in aging compared to those who worked occasionally with older adults (see Table 4). However, across groups, there was similarity in the topics rated to be of most interest. Of 24 potential educational topics, nine topics were ranked of interest by at least one third of the sample: adjusting to medical illness/disability, depression, bereavement/grief, dementia, anxiety, psychotherapy, caregiver stress, positive psychological growth, and health promotion/maintenance. The most commonly used resources

Table 2  
*Primary Specialty for the Total Sample and for Respondents Providing Services to Older Adults Frequently/Very Frequently*

Primary specialty	Percent of total sample who identify specialty (N = 4,115)	Percent within each specialty providing services to older adults <sup>a</sup> (N = 1,503)	
	%	%	n
Professional geropsychology	1.2	100.0	48
Rehabilitation psychology	1.2	65.3	49
Clinical health psychology	7.0	60.3	282
Clinical neuropsychology	6.3	59.9	252
Group psychology	.4	50.0	16
Couple & family psychology	1.8	47.9	71
Clinical psychology	45.2	41.9	1,817
Psychoanalytic psychology	1.4	41.1	56
Cognitive behavioral psychology	5.9	39.1	238
Counseling psychology	9.4	31.5	378
Forensic psychology	2.7	26.2	107
Police & public safety psychology	.3	23.1	13
Organizational and business consulting	.4	20.0	15
Clinical child & adolescent psychology	15.4	4.5	619
School psychology	1.5	1.7	59

<sup>a</sup> Percent providing services frequently or very frequently within each specialty area.

for education across respondents were in-person training (52.4%), books and journals (50.0%), colleagues (47.5%), and personal experience (43.5%). The least used resources for both frequency groups were graduate training programs, APA Guidelines for Practice, and clinical supervision experience.

**Discussion**

The number of older adults in the U.S. (and in much of the developed world) is growing at a remarkable rate reflecting increased longevity and cohort trends. A looming crisis in the geriatric behavioral health workforce has been predicted for decades (Jeste et al., 1999) and continues to receive broad attention (Institute of Medicine, 2012). Within psychology, despite ongoing efforts by APA and others to build awareness of behavioral health needs of older adults, to define geropsychology competencies and a training model, and to support training of specialists and non-specialists alike, there has been little progress in bridging the geropsychology workforce gap (Hoge et al., 2015). The 2015 APA Survey of Psychology Health Service Providers (American Psychological Association, 2016a) provides an opportunity to reexamine the structure of the psychology workforce vis-à-vis the aging population in the context of training and education.

The national demand for psychologists who provide services to older adults is expected to grow by 5,970 FTE from 2015–2030 (American Psychological Association, 2018). This suggests demand will increase, on average, by about 375 FTEs per year. To address this demand, we will discuss issues related to behavioral health care by specialty trained psychologists opportunities for all psychologists, and reimbursement considerations.

**Specialty-Prepared Psychologists**

Previous surveys indicated that only 3–4% of psychologists focus their work on older adults (American Psychological Association, 2010; Qualls et al., 2002). In this survey, 1.2% of psychologists stated that their primary specialty is geropsychology. The present APA survey is one of the first large scale surveys of psychologists to include non-APA and APA members across specialties, and therefore likely provides a better estimate of geropsychological specialists in practice. This percentage falls far short of the current proportion of older adults in the population (15.6%) and the growing future portion (20.6% in 2030) (Colby & Ortman, 2014) (see Figure 2), and is lower than previous projections of 3–4% (American Psychological Association, 2010; Qualls et al., 2002). By way of contrast, the child and adolescent population will represent 22.2% of the population by 2020, and 19.8% of the population by 2060, and the current percentage of child and adolescent trained psychologists is 15.4%, indicating that specialty trained psychologists are more closely matched to age proportion for children and adolescents, while being grossly out of scale for older adults (see Figure 2).

The APA survey considers supply, but not the need for behavioral health care—demand (i.e., how many individuals use services) and need (i.e., how many individuals have symptoms indicating treatment) are distinct concepts. While older adults generally have lower rates of mental disorders than younger adults, they have a wide range of subclinical mental disorder symptoms that affect everyday functioning and quality of life, including behavioral health concerns, late-life adjustment challenges, needs for cognitive evaluation services, and family caregiving concerns that may contribute to demand for psychological services. In addition, given the higher prevalence of behavioral health problems among those adults who are

Table 3  
*Medicare Participation and Changes in the Geropsychology Module Sample (n = 2,542)*

Item and response	n	%
Participation in Medicare		
Yes, I am a Medicare Provider	1,590	65.6
No, I have never participated in Medicare	430	17.7
No, I previously participated in Medicare	318	13.1
I don't know if my organization participates in Medicare	85	3.5
Reason for not participating in Medicare (for those who never or previously participated)		
Reimbursement rates are too low	297	39.9
I do not participate in any insurance plans	281	37.8
Client case-mix is primarily non-Medicare	201	27.0
Delays in getting paid	176	23.7
Concerns about regulations	153	20.6
I work for a healthcare system/agency	143	19.2
Concerns about audit risk	89	12.0
Other	138	18.5
Medicare changes in the past 3 years (for current Medicare providers)		
No change	738	46.8
More Medicare patients/clients seen	625	39.6
Fewer Medicare patients/clients seen	115	7.3
N/A (e.g., Have not been in this practice setting for 3 years)	100	6.3

Note. Missing values were excluded at the item level prior to analysis. Totals for reason for not participating in Medicare may not sum to 100 percent due to allowing multiple selections.

Table 4  
*Geropsychology Educational Interests in Descending Order of Endorsement*

Educational topic	Frequency of providing services to older adults				$\chi^2$	df, N	p
	Occasionally		Frequently/very frequently				
Adjusting to medical illness/disability	477	48.5	938	62.7	48.7	(1, 2479)	<.001
Depression	499	50.8	845	56.5	7.8	(1, 2479)	.005
Bereavement/grief	471	47.9	805	53.8	8.3	(1, 2479)	.004
Dementia	371	37.7	766	51.2	43.3	(1, 2479)	<.001
Anxiety	372	37.8	650	43.4	7.7	(1, 2479)	.006
Psychotherapy	359	36.5	588	39.3	1.9	(1, 2479)	.163
Caregiver stress	307	31.2	614	41.0	24.5	(1, 2479)	<.001
Positive psychological growth	275	28.0	548	36.6	20.0	(1, 2479)	<.001
Health promotion/ maintenance	232	23.6	508	34.0	30.4	(1, 2479)	<.001
Geriatric assessment	203	20.7	479	32.0	38.4	(1, 2479)	<.001
Aging in culturally diverse populations	199	20.2	444	29.7	27.5	(1, 2479)	<.001
Marital/family difficulties	233	23.7	406	27.1	3.7	(1, 2479)	.056
Neuropsychology	149	15.2	388	25.9	40.6	(1, 2479)	<.001
Trauma/abuse	188	19.1	347	23.2	5.8	(1, 2479)	.02
Capacity assessment	137	13.9	391	26.1	52.7	(1, 2479)	<.001
Sexuality and sexual problems	163	16.6	314	21.0	7.4	(1, 2479)	.006
Substance abuse	123	12.5	288	19.3	19.5	(1, 2479)	<.001
Geropsychology competencies <sup>a</sup>	109	11.1	292	19.5	31.1	(1, 2479)	<.001
Disabilities	93	9.5	279	18.6	39.3	(1, 2479)	<.001
Psychoeducational intervention	94	9.6	236	15.8	19.8	(1, 2479)	<.001
Chronic mental illness	92	9.4	220	14.7	15.4	(1, 2479)	<.001
Personality disorders	96	9.8	209	14.0	9.7	(1, 2479)	.002
Staff training/supervision	77	7.8	184	12.3	12.6	(1, 2479)	<.001
Other treatment areas	29	3.0	50	3.3	.3	(1, 2479)	.587
Grand total	983	100	1496	100			

Note. Percentages were calculated based on the number of respondents who indicated educational topics of interest in geropsychology (some participants did not respond to this question).

<sup>a</sup> Attitudes, knowledge, and skill competencies for professional geropsychology (per the "Pikes Peak Model").

currently middle-aged and their greater familiarity with and utilization of behavioral health services, the need and demand for psychological services in future generations of older adults will likely exceed that of the current generation of older adults (Institute of Medicine, 2012).

As such, it will be crucial to increase the number of doctoral, internship, and postdoctoral training programs leading to geropsychology specialty preparation. At present, there are 16 doctoral programs, 16 internship programs, and 15 postdoctoral program members of the Council of Professional Geropsychology Training Programs (CoPGTP). While most but not all geropsychology-focused training programs have joined CoPGTP and, as discussed below, not all older adults need to see specialty-trained geropsychologists, the supply of specialty-trained geropsychologists is not anticipated to meet demand. For example, each of the 15 geropsychology postdoctoral programs, which typically graduate one to two fellows per year, would need to graduate approximately 25 fellows per year to meet the demand of specialists for behavioral health care of older adults.

As such, geropsychologists may expect to have an expanding role in training nonspecialist psychologists to provide services for older adults (Simpson, Leipzig, Sauvigné, & the Donald W. Reynolds Geriatrics Education Collaborative, 2017). However, geropsychology program graduates report they are less well prepared for educator roles than for clinical and research roles (Carpenter, Sakai, Karel, Molinari, & Moye, 2016). Consequently, enhanced training in educator competencies will be important for those with expertise in geropsychology, as is found in medicine (Christmas,

Park, Schmaltz, Gozu, & Durso, 2008; Pinheiro et al., 2015), including the use of educational technology innovations, such as webinars, online courses, or distance consultation (Ramaswamy et al., 2015).

At the graduate training level, enhanced training in education could be accomplished through collaborations with educational psychology divisions, or encouraging students in who plan to specialize in underserved populations to complete a graduate certificate in education where offered. At the postlicensure level, enhanced training in education might be accomplished via online learning. For example, Washington University and VA Boston Health care System recently collaborated in a 9 session webinar "Enhancing your Confidence as an Educator in Geriatric and Gerontology" which offers free CE credits for psychologists and other disciplines (archived at <http://pages.wustl.edu/geropsychology/ace-webinar>) seeking to enhance their skills as educators.

### Generalists and Other Psychologists

A previous workforce survey found 39% of respondents stated that their caseloads included some older adults, although this was not the focus of their work (American Psychological Association, 2010). Similarly, in the present survey, 37% of respondents reported that they frequently or very frequently provided services to older adults, most often these were specialists in rehabilitation psychology, clinical neuropsychology, and clinical health psychology. While the exact meaning of "frequently" or "very frequently"

is unclear, these results suggest that about one third of psychologists provide at least some services to older adults. Given the types of specialists most likely to provide those services, older adults may have relatively greater access to cognitive and neuropsychological assessment services, and specific health and rehabilitation interventions, but less access to specialized and comprehensive geropsychological services. In the present study, the sample size was too small to compare the subtypes of services provided to older adults within these specialty areas to further clarify this concern.

The good news is that older adults received behavioral health care from a substantial proportion of the sample. It is more complex to determine which and what proportion of older adults require behavioral health care by a geropsychologist specialist versus an adequately prepared generalist. Similarly, some older adults may be better served by another specialist (e.g., an older adult who needs complex differential diagnosis through neuropsychological assessment provided by a neuropsychologist). APA defines a specialty as involving a distinctive configuration of competent services for specified problems and populations, derived from a responsiveness to a public need, a recognition of the importance of cultural and individual diversity, and the distinctiveness of the body of knowledge (CRSPPP, 2011). At an individual level, health service providers need a strategy to guide decisions about when an older adult's needs are best met by a geropsychologist—or a neuropsychologist, rehabilitation psychologist, health psychologist, clinical psychologist, or another professional discipline. In short, there are distinct, as well as overlapping, competencies across specialties for which no decision-making algorithm yet exists to guide referrals. At a policy level, it would be useful to determine the evidence for the need for specialized services within subpopulations of older adults, and also weigh an individual's right to access psychological services of appropriate and equal quality (American Psychological Association, 2017c).

Psychologists who worked with older adults frequently reported more often encountering almost all treatment conditions, a finding that is difficult to understand. It may be that older adults have more complex behavioral health presentations, such as comorbid conditions, or that older adults are less likely to pursue behavioral health treatment until they are more significantly affected by psychiatric disorders at the time of seeking treatment. Older adults are more likely to have medical comorbidities (Salive, 2013) which is consistent with the finding that those who worked with older adults were more likely to describe practices that were colocated with physicians, physician assistants, nurses, and nurse practitioners. This model of care is fully consistent with psychologists' increased interest in practicing in integrated care settings (American Psychological Association Presidential Task Force on Integrated Health Care for an Aging Population, 2008; McDaniel et al., 2014), which may be even more important for serving older adults who are known to highly underutilize traditional outpatient psychotherapy services.

How do we provide more opportunities for nongeropsychologists to receive training for competent work with older adults with complex comorbidities and life contexts? Opportunities at the doctoral program level and via internship rotations are both important (Hinrichsen, Zeiss, Karel, & Molinari, 2010). Options at the doctoral program level include generalist programs with formal integration of aging content and/or electives (Holtzer, Zweig, &

Siegel, 2012) and practicum (Pachana, Emery, Konner, Woodhead, & Edelstein, 2010).

However, it has been difficult to convince nongeriatric trained educators of the need to prepare health service providers to work with older adults (McCleary, Boscart, Donahue, & Harvey, 2017). APA requires accredited graduate, internship, and fellowship programs to address issues of cultural and individual diversity, defined as "age, disability, ethnicity, gender, gender identity, language, national origin, race, religion, culture, sexual orientation, and socioeconomic status" (American Psychological Association, 2015), but most programs focus on racial and ethnic diversity, not other aspects of diversity such as age (Yeo, Cornish, & Meyer, 2017). Suggested foundational competencies for working with older adults provide a roadmap for education (Hinrichsen, Emery-Tiburcio, Gooblar, & Molinari, 2018), and include important attention to attitudinal competencies such as reducing age bias and ageism. Ageism is persistent and may result in discrimination in health care settings (Levy & Macdonald, 2016). Education can be effective in reducing ageism (Lytle & Levy, 2017). In addition, exposure to older adults also may enhance interest in aging careers (Merz et al., 2017) and decrease ageism. Therefore it may be useful to expand training opportunities with older adults early in graduate training through recruitment of older adults to training clinics, and, in an ideal world, reimbursement by Medicare for supervised care provided in training clinics.

In the present study, respondents expressed robust interest for continuing education (CE) in aging. Many topics were of interest to those surveyed, suggesting a menu of possible topics. Such work may be guided by efforts to delineate foundational competencies for working with older adults (American Psychological Association Office on Aging, 2014). Recommendations from a recent working group suggest 15 hr of training, consistent with APA guidelines for "exposure" in a specialty area, and provide suggested content topics (Hinrichsen et al., 2018). The findings of this survey confirm an interest in and a need for vigorous efforts for aging related education, across many areas such as adjusting to medical illness/disability, depression, bereavement/grief, dementia, and anxiety, both at the graduate level and CE level. Outreach that draws psychologists to CE and potentially enhance their identity as aging service providers is crucial. The APA Office on Aging routinely conducts outreach efforts—which are often targeted to high school students, undergraduates, and graduate students (see e.g., the web-based student resource, "Exploring Careers in Aging: A Roadmap for Every Step of the Way," <http://www.apa.org/pi/aging/resources/careers/index.aspx>). It may be useful to expand these outreach efforts to include psychologists who do not currently identify as geropsychologists.

### Reimbursement for Providing Care to Older Adults

Psychologists in this sample worked across different settings, most commonly independent practice, which could include outpatient office-based practice, long term care consultation, or other configurations; those who worked with older adults were more likely to be in settings integrated with medical providers. Medicare is a primary insurer for older adults, and two thirds of the geropsychology module respondents provided psychological services through Medicare reimbursement. Some of the participants (13%) had stopped providing Medicare services. Those not providing



services through Medicare cited perceived low Medicare reimbursement rates among other reasons. This finding is not entirely clear. In many states current Medicare reimbursement rates are now equivalent to private insurer (but not private pay), however Medicare C also known as Medicare Advantage, may have lower reimbursement rates (Carney & Norris, 2016). Education and training must address not only clinical competencies, but business management strategies, especially updated education regarding Medicare fee structures and changes over time, given these challenges.

## Limitations

This study had several limitations. Due to sampling procedures and availability of e-mail addresses, the results may not be geographically representative. Likely, proportionately more respondents are from states where e-mail addresses were available in state licensing board lists. The modest overall response rate, while not out of line with general survey response rates, indicates the results may not be representative of the population of licensed psychologists. Comparisons of demographics (gender, race/ethnicity, age) in the sample to APA membership (American Psychological Association, 2016b) and psychology workforce (American Psychological Association, 2017b) indicated the patterns were similar for the sample and APA members. However, the workforce was more female, more racially/ethnically diverse, and younger. These comparisons suggest the sample may be more representative of APA members than the workforce as a whole. Additional information about sampling characteristics and potential biases may be reviewed in the full report (American Psychological Association, 2016a).

## Conclusions

In conclusion, these results document the continued substantial psychology workforce gap in the care of older adults and the anticipated widening of the gap given population and professional projections. The geriatric workforce “crisis” identified by Jeste and colleagues in 1999 (Jeste et al., 1999) has not only materialized but appears to have worsened. The field of psychology must continue to guide training and education at all levels (graduate, internship, postdoctoral, and postlicensure) to meet the behavioral health care needs of older adults. Several near-term solutions include increasing the pool of geropsychology specialists and of generalists with minimum competencies in geropsychology through enhancing the educator competencies and activities of geropsychology specialists, ensuring training programs address all aspects of diversity including age, expanding CE across multiple platforms consistent with foundational competencies for working with older adults, and creating evidence-based decision trees for determining when an older adult needs a referral to a geropsychological specialist.

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