

## Introduction to the Field of Geriatric Mental Health Research

In the next two decades, as the baby boomers age, older Americans will be disproportionately affected by psychiatric illness, and the demand for mental health services will increase dramatically. By 2030, experts anticipate that 18% to 28% of older Americans will be affected by some type of mental health problem, but that there will be only one geriatric psychiatrist for every 5682 adults aged 65 and above. Clearly, there is a strong public health need to recruit the next generation of geriatric mental health researchers. This review looks at the underlying causes of this problem and how targeted initiatives in mentoring, research development, and academic training programs can alleviate the crisis.

### Introduction

In general, the aging of the American population is a widely understood and accepted phenomenon. In 1900, only 4% of the population was aged 65 or older, compared with 13% in 1997.<sup>1</sup> This trend is accelerating and will continue to do so throughout the first decades of the 21<sup>st</sup> century. By the year 2025, there will be 62 million adults in the United States (US) aged 65 and older. Though it is broadly accepted that the aging of the baby boomers, a large cohort of the American population, will have a significant economic and political impact, the formidable challenge of confronting geriatric mental health problems in this population is underappreciated.<sup>2</sup>

The unfortunate reality is that in the next 2 decades, as the baby boomers age, older Americans will be disproportionately affected by psychiatric illness, and the demand for mental health services will increase dramatically. In 1970, 4 million individuals aged 65 and above had psychiatric disorders. That figure is expected to almost quadruple by 2030, when 15 million older Americans are expected to suffer from psychiatric disorders.<sup>1</sup> As early as 2010, projected figures suggest that there will be between 7 million and 11 million older adults with significant psychiatric symptoms, and by 2030, experts anticipate that 18% to 28% of older Americans will be affected by some type of mental health problem.<sup>2</sup> In many ways, this problem is the byproduct of success. Ironically, clinical advances have facilitated longer

life spans, making it possible for those who might have died of physical illnesses to survive into old age and face the risk of developing mental illness.<sup>1</sup>

Paradoxically, while advances in clinical care have greatly increased the average life span, the field of geriatric psychiatry has faltered. There is a worrisome shortage of mental health professionals who are adequately trained to meet the mental health, substance abuse, and psychosocial needs of the ever-growing population of older Americans. Currently, approximately 80 geriatric psychiatrists complete academic programs each year.<sup>3</sup> The shortage of qualified specialists in this field is exacerbated by the fact that many of the mental health professionals who currently work with geriatric patients are themselves close to retirement. These people were educated at a time when there was substantially more support for pursuing different types of psychiatric specialization. Specifically, they often had greater access to stipends, specialized curricula, and training projects. As they leave the work force, the ability to meet the psychiatric needs of the elderly will be compromised. According to projected estimates, by 2030, if trends continue on their current trajectory, there will be only 1 geriatric psychiatrist for every 5,682 adults aged 65 and above.<sup>3</sup> The lack of focus on the mental needs on older Americans can be seen across disciplines. In general, mental health students have very little exposure to gerontological content in their founda-

tional course work and field work. Case in point: Only 28% of all graduate psychologists have even a minimal amount of graduate training in geriatrics.<sup>3</sup>

## Who Will Serve the Needs of Older Adults With Mental Health Disorders?

Demographic trends strongly suggest that the mental health treatment needs of older adults will rapidly outpace the number of specialists available to address these needs. Within the next 2 decades, experts predict that 5000 geriatric psychiatrists and 5000 geropsychologists will be needed to address the pressing challenges that this population will face. Today, however, there are only 2425 geriatric psychiatrists and between 200 and 700 geropsychologists.<sup>1</sup>

Clearly, having too few specialists available to provide geriatric mental health care services represents a barrier to treatment and has negative implications for ensuring quality of life as people age.<sup>3</sup> It is important to note that stigma permeates certain aspects of healthcare, including both geriatrics and mental health care. When these 2 areas are combined, the impact of stigmatization has a pernicious effect on the ability to create a strong network of people and resources dedicated to addressing late-life mental health disorders.<sup>2</sup> Treating mental health disorders in the elderly is an interdisciplinary endeavor. Effectively addressing their mental health means more than prescribing pharmaceuticals or other clinical interventions, though this is a critical part of treatment. It means recognizing all of the issues that are intrinsically linked to mental health, including issues related to physical health, as well as social, economic, and housing issues.<sup>3</sup>

## The Role of Geriatric Mental Health Research

Although there are an increasing number of fellows and faculty in geriatric mental health, there is a recruitment crisis in geriatric mental health research. Numerous barriers contribute to this problem. First, there is the overriding problem of ageism that devalues older people, and by extension their role as subjects of research interest. Other barriers include the increased amount of time required to prepare for a research career and the perception by physicians that they are not competitive with PhDs. In addition, the lack of appropriate research track options and mentorship opportunities are obstacles that prevent many fellows from pursuing

long-term research careers.<sup>1</sup> The financial disincentives are hard to overcome, because trained specialists, who are usually burdened with debt, can make more money in industry or private clinical practice.<sup>4</sup>

Traditionally, geriatric issues have been neglected in psychiatric research. Therefore, the current perspective on all aspects of mental health care, including diagnostic criteria and treatment, is mainly based on research on young adults. Indisputably, the ability to compile a robust body of research directly related to the mental health needs of older adults can improve outcomes by informing the way older adults with mental health problems are diagnosed and treated. Appropriate mental health-related research can also address some of the most pressing problems associated with healthcare delivery to older adults.<sup>1</sup>

For example, there is a lack of age-appropriate diagnostic criteria for substance abuse in older adults despite the fact that baby boomers are expected to have a higher risk of depression, anxiety, *and* substance abuse compared with other cohorts of elderly adults. In addition, many primary care physicians who treat older patients often dismiss psychiatric symptoms as “just a normal part of aging” or misconstrue psychiatric symptoms as physical or cognitive in etiology. It is not unusual for a treating practitioner to think of depression as normal for an older person, because the underlying belief system is based on the notion that aging is inherently bad. This belief system inevitably leads to a series of clinical missteps that directly affects both the mental and often the physical well-being of older adults. Because of their lack of understanding of geriatric mental health, treating practitioners may miss signs of suicidality or make prescribing decisions that do not result in optimal outcomes for patients. Population-specific research can address these problems by creating a knowledge base to be used as a foundation for training clinicians, other researchers, policymakers, and the lay public, with the net effect being enhanced awareness and better treatment outcomes.<sup>1</sup>

Because of the dearth of geriatric mental health research, the need for specific types of investigational inquiry varies widely. Fundamentally, research is needed in the areas of prevention, translational research (from bench to bedside), intervention studies, and large-scale psychopharmacologic investigations. Conducting studies in elderly subjects can shed light on many of the most challenging tactical issues associated with the treatment of geriatric mental health disorders, including issues of polypharmacy, the increased risk of adverse events in this population, age-related changes in

pharmacokinetics and pharmacodynamics, and the need to improve quality of life in elderly patients with mental health disorders.<sup>1</sup>

## **Increasing the Ranks of Geriatric Mental Health Researchers**

There is a strong public health need to grow the next generation of researchers who focus on aging and mental health; however, the low number of young scientists in the career-development pipeline has been an ongoing challenge to shoring up geriatric mental health research.<sup>5</sup> The ability to effectively address the various conceptual and methodological challenges of conducting research focused on older adults is dependent on attracting new investigators into the field and supporting their career development.<sup>4</sup> The best time to bring new scholars into the pipeline is when potential candidates are in doctoral training programs.

The National Institute of Mental Health (NIMH) has undertaken a targeted initiative focused on increasing the commitment to research on the etiology and treatment of late-life mental illness.<sup>5</sup> NIMH supports the education and training of all mental health researchers, with a particular emphasis on late-life mental health researchers, through a variety of well-established means. Programs include early research training, mentored academic career awards, and mid-level career awards.<sup>6</sup> The operative dictum is, "Recruit early, recruit often." An important strategy for filling the pipeline is to expose students to scientist role models in geropsychology and geriatric psychiatry starting in high school all the way through medical school. This exposure should include discussion of some of the most compelling questions in neuroscience, and behavioral and psychiatric research.<sup>5</sup>

The career track in geriatric mental health research involves starting as a doctoral student, progressing to post-doctoral studies, making a definitive commitment to geriatric mental health research by becoming a junior investigator, successfully transitioning to independent investigation, and finally becoming an established senior leader and mentor for others in the field. The path from interested student to committed research fellow is rife with obstacles, and the number of individuals who move successfully through the career pipeline is winnowed at each juncture. The NIMH career development mechanism is one important route to becoming an independent investigator in geriatric mental health. NIMH Level 1 career awardees (K-series) are mentored and receive up to 5 years' salary support. The

next step in this progression is to be awarded funding for independent investigation (R01).<sup>4</sup>

In geriatric mental health care research career development, one of the most critical junctures is completing work as a junior investigator and becoming an independent investigator, and there is an especially high risk of attrition at this point. Analysis of the career progress of young scholars from Level 1 status to independent scientist status between 1992 and 2001 showed that 43.5% of junior investigators ended up achieving funding for independent investigation (R01). On average, the time lag between the end of their award and obtaining independent investigator funding was 1.35 years, though it ranged as high as 5 years. However, two-thirds of career awardees do not receive R01 funding within a year of completing their Level 1 career award, and as time passes, they are less likely to ever make the transition to independent investigators.<sup>4</sup>

As discussed earlier, there are several key obstacles that contribute to a depleted pipeline at one of the most critical junctures of career development. Many of these problems are just beginning to be addressed. The following are some of the preliminary solutions that are being used. Financially, those who are on the geriatric research career track can now benefit by accessing loan repayment or forgiveness programs, increased fellowship stipends, and other financial measures designed to make it easier to continue pursuing a research career focused on late-life mental health.<sup>4</sup> In addition, career-development advocates are focusing on early recruitment, attempting to recruit a more diverse group of trainees, formalizing career development opportunities, and promoting mentorship within the field. Advocates strongly suggest that mechanisms that promote psychiatric research training need to be built into the academic system, so that medical students can be positively influenced to choose geriatric mental health research. Once they make that choice, however, there must be a support structure in place to help them successfully navigate the career pathway.<sup>7</sup>

## **Overcoming Barriers to Progress on the Geriatric Mental Health Research Career Track**

When it comes to ensuring that there is a new flow of geriatric mental health researchers coming into the field and that the pipeline is consistently replenished, the primary responsibility lies with the scientific community. Their efforts must be comprehensive and continuous with a focus

on recruitment, training, mentoring, consultation, and collaboration. Some of the most essential survival skills that aspiring researchers need are the ability to prepare grants, solid time-management skills, and the ability to collaborate and consult effectively.<sup>4</sup>

Success is also contingent on socializing young scientists into the geriatric mental health research community through encouraging their attendance at professional conferences, facilitating strong relationships with mentors, and supporting their efforts to publish peer-reviewed articles. In particular, the positive impact of publishing early in one's research career cannot be discounted. This can serve as an important foundational experience on which to build a productive, innovative, and respectable career as a senior researcher and eventually a leader in the geriatric mental health research community.<sup>5</sup>

A vital area of interest in the geriatric mental health research community is the development and growth of geriatric psychiatric fellowship programs. Research shows that very few of the first-year slots are filled in these academic programs, and that most of the occupied slots are filled by international medical students. Strategies to enhance recruitment focus on providing early exposure to the field, identifying candidates who are likely to succeed in these programs because of their positive attitudes, and involving trainees in scientific meetings and organizations.<sup>8</sup>

Another recruitment/retention strategy, however, has been more successful. Academic training programs, such as the Summer Research Institute (SRI) in Geriatric Psychiatry, a week-long program, offers promising post-residents, post-doctoral students, and junior faculty the chance to receive short-term intensive training. Each summer, SRI provides 25 to 30 attendees with experiences that help propel them forward in their research careers. They attend interactive discussions, work one-on-one with mentors, and receive to-the-point didactic training that helps them master the nuts and bolts of research, including research methods, mastering the grant application process, subject recruitment, and publishing. One crucial goal is to eliminate the trial-and-error approach to applying for grants that many junior researchers use when trying to attain funding. Most important, there is a one-year follow-up "booster session" designed to reinforce the positive momentum initiated during SRI. As a group, SRI attendees are successful. One year after attending SRI, most attendees publish a paper and make a scientific presentation based on their research. In addition, many receive NIMH grants, foundation awards,

and academic promotions. The underlying goal of the SRI and similar programs is to prevent young researchers from experiencing frustration that may lead them to drop out of academic programs, thus cutting short fulfilling careers in geriatric mental health research.<sup>9</sup>

Another notable opportunity for qualified candidates interested in geriatric mental health research is the Summer Training in Aging Research Topics--in Mental Health (START-MH) program, a new federally funded program that offers intensive short-term research training for undergraduate, graduate, and medical students. Trainees spend 10 weeks working with mentors during the summer and complete the program with the presentation of a research poster. Attendees' response to the program has been uniformly positive. In addition to receiving stipends, which range from \$5000 to \$6250, attendees reported that they were interested in developing their geriatric mental health research careers, having mentoring relationships, and being able to complete the program in 10 weeks.

A third program, the Advanced Research Institute in Geriatric Psychiatry (ARI) is a 3-day spring program designed for junior investigators to help enhance their chances of obtaining R01 (independent investigator) funding and successfully undertaking their research as independent investigators. Each year 12 attendees are selected. Essentially, ARI is an extension of SRI, but it is designed for individuals in earlier stages of their research careers. In addition to helping attendees advance beyond the junior investigator stage of their careers, ARI also provides them with mentors who provide ongoing tutoring, help with time management, and support when they fall behind in their scientific pursuits.<sup>10</sup> These short-term programs have become popular among aspiring researchers. In many ways, the success of these programs makes them ideal models for establishing structures and mechanisms that can help assure a continued flow of geriatric mental health investigators.

The role of mentors in geriatric mental health research is of paramount importance. The Department of Psychiatry at Western Psychiatric Institute and Clinic (WPIC) at the University of Pittsburgh Medical Center aims to help their post-doctoral clinical research fellows in psychiatry succeed by providing a weekly research survival skills course focused on problem-solving and developing grant-writing skills. Mentors assist fellows with formulating their project ideas, using data sets, submitting proposals, encouraging supervised review of articles submitted to journals, and obtaining opportunities for coauthorship. Because the fellows

are working in a supportive peer environment and receiving ongoing support, they have a better chance of reducing the time between the end of their fellowship and the receipt of an extramural grant.<sup>11</sup>

In summary, there is a critical need to develop research talent in the field of geriatric mental health. Certainly, the human resources are there: Interested candidates who receive mentoring, other types of institutional and financial support, or gain access to programs, such as SRI, ARI, or START-MH have a better chance of progressing through the geriatric mental health career pathway, and in the process, of making the research contributions that will advance the standard of care for the growing population of older adults with mental health disorders.

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