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The Duke Center for the Study of Aging: One of Our Earliest Roots

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The Duke University Center for the Study of Aging and Human Development (Duke CFA) was established by a multidisciplinary group of visionary scientists in 1955. It is the oldest continually operating center or institute dedicated to aging in the United States. This article outlines the origins of the Duke CFA and summarizes the major research initiatives conducted in its early years. The primary focus is on these landmark studies and their legacies. Those studies made important initial contributions to the knowledge base, introduced measurement tools and research designs that became standards in the field, and served as the impetus for later and current research. The hallmarks of these studies are their multidisciplinary foundations and their focus on the health and well-being of older adults. The Duke CFA's current research clearly builds upon the goals, insights, and empirical results of previous research initiatives. Although aging research is and has been the bedrock of the Duke CFA, developing services responsive to the needs of older adults and multidisciplinary training have also been hallmarks of the Duke CFA. Duke's Geriatric Evaluation and Treatment Clinic was established in 1974 and remains a national model for geriatric assessment. Our postdoctoral research training program has graduated more than 200 scholars and our Geriatric

Fellowship program has graduated 113 geriatricians. Many of our graduates have exemplary careers in aging, contributing to important research advances, providing care to thousands of older adults, serving as leaders in the field, and training new generations of gerontologists and geriatricians.

Key Words: Multidisciplinary research, Geriatric assessment, Normal aging

The year was 1955. American politics and policies focused on the increasingly frigid relations with the Soviet Union and the challenges created by the sustained very high post World War II fertility known as the baby boom. Policy makers faced unprecedented challenges, including shortages of pediatricians, adequate housing for young families, and overcrowded schools. The potential impact that this demographic shift would have on the aging of the population and society at large was largely unrecognized. But at Duke University, under the leadership of Dr. Ewald W. (Bud) Busse, a small group of scientists, spanning a wide range of disciplines, anticipated the looming dramatic population age shift and formed the Duke

University Center for the Study of Aging and Human Development (henceforth CFA) in 1955. Shortly, thereafter, the CFA became one of the first five regional centers on aging established by the National Institutes of Health (NIH) and is the only one continually in existence to this day.

Bud Busse came to Duke as chair of the psychiatry department in 1953 and brought with him research exploring the brain wave patterns of children and older adults. He also brought an interest in multidisciplinary research on social and behavioral factors associated with mental functioning in later life. Within his first 2 years at Duke, Busse chartered a multidisciplinary, university wide Center for the Study of Aging that included scientists from departments in the medical center, arts and sciences, and other schools. Bud Busse was its founding director. Among the distinguished scholars who planned and established the CFA were Philip Handler, professor of biochemistry; Juanita Kreps, professor of economics; John McKinney, professor and chair of sociology; Eugene Stead, professor and chair of medicine; and Jack Botwinick, professor of psychology. In 1963, with support from NIH and the Duke Endowment, a five-story wing of the medical center was built to house the scientists, administrators, support personnel, and research infrastructure of the CFA. In 1980, the building was named the Busse Building, and it remains the focal site for research and training in gerontology and geriatrics.

It is not always easy to establish successful multidisciplinary research centers/institutes. Discipline-based departments have always been the primary academic units in which faculty reside, raises and promotions occur, and degrees are awarded. It is especially difficult for faculty to invest in multidisciplinary research if their departments do not value and support such scholarship. The success of the CFA is a result of several factors. First, Bud Busse had considerable influence in the university. He worked with departments to hire and promote faculty with aging interests. Very importantly, as chair of psychiatry, he also established divisions of medical psychology and medical sociology. Many key faculties in aging were appointed in those divisions rather than in their disciplinary departments. These appointments were tenure track PhD's in the social and behavioral sciences and were full-fledged faculty in every way. Over the years, the CFA has used a number of other strategies to entice faculty with aging interests to affiliate with the center. Among

these are financial support for pilot projects, occasional summer support for arts & sciences faculty, access to high-quality statistical and computing expertise, and providing research resources and opportunities to Duke undergraduate and graduate students. Multidisciplinary research centers are now the fundamental research infrastructure in the social, behavioral, policy, and biological sciences at Duke. There are now literally dozens of such centers.

Although CFA investigators have conducted hundreds of studies and published thousands of articles on aging, we focus here on early landmark studies and their legacies. These studies made important initial contributions to the knowledge base, introduced measurement tools and research designs that became standards in the field, and served as the impetus for later and current research. The hallmarks of these studies are their multidisciplinary foundations and their focus on the health and well-being of older adults.

The Duke Longitudinal Studies

The first Duke longitudinal study (DLS-I), formally named the Longitudinal Study of Normal Aging, began in 1954. The DLS-I was initially funded by National Institute of Child Health and Human Development. When the National Institute on Aging (NIA) was established in 1974, the CFA's aging grants were transferred there. Aging research was in its relative infancy in 1955 and research to that point focused largely on the pathologies of aging—including physical illnesses, mental illnesses and dementia, and social and psychological deficits. CFA scientists noted that very little was known about “normal” aging, thus precluding disentangling the effects of aging *per se* from disease—an issue that continues to intrigue gerontologists and geriatricians today. Thus, the CFA's first major research initiative was designed to observe the dynamics of normal aging.

The DLS-I research design was innovative and designed to best capture normal aging using the tools available at the time. The insight that accurate observation of age changes required longitudinal data obtained from the same sample over time was quite new in the mid-1950s. Indeed, DLS-I was the first major longitudinal study of older adults in the world. The sample consisted of 270 adults, aged 60–90 at baseline, who were recruited from community organizations and advertisements. To observe “normal” aging, participants were required to be relatively healthy and live independently

in the community. Participants came to Duke Medical Center for 2 days of tests at each time of measurement. The data obtained included an extensive battery of demographic, social, and economic measures; psychological tests, including intelligence, memory, and personality; and a thorough physical examination by a physician and laboratory tests including chest X-rays and EEGs. Participants were interviewed and tested every 2 years. There was nothing magic or even empirically justified in the schedule of measurements. DLS-I investigators reasoned that 2-year intervals between measurements would be sufficiently long that meaningful changes could be observed and sufficiently short that major changes in health and well-being would not be missed.

The 2-year assessments continued for 22 years. By that time, most of the participants had died, leaving a very small sample. Mortality surveillance continued until all participants had died. Beginning in 1975, survivors were asked to commit to an autopsy for collection of physical specimens. Most of the survivors agreed to this. Data from these participants proved to be especially valuable for studies of Alzheimer's disease and other dementias.

The second Duke Longitudinal Study (DLS-II), usually referred to as the Adaptation Study, began in 1968. The DLS-II was similar to the DLS-I in several ways: test dates were 2 years apart, participants came to the Medical Center for two full days of data collection, and the measures included those in DLS-I and additions. But the DLS-II also differed from the DLS-I in important ways. First, the age range of the sample was 45–70. DLS-I investigators found that to understand aging, data were needed before the conventional threshold of old age. Second, although the DLS-II sample ($n = 502$) was not representative of a defined population, efforts were made to ensure a more systematic sampling frame. Participants in DLS-II were selected from a list of Durham area subscribers to Blue Cross–Blue Shield health insurance. Third, DLS-II investigators implemented an age–period–cohort design to gain an understanding of whether observed differences were age changes or cohort differences. The DLS-II had four times of measurement (1968, 1970, 1972, and 1974).

Space limitations preclude a comprehensive summary of the many specific contributions in the hundreds of articles published from DLS-I and DLS-II. Many of the most important articles from the Duke longitudinal studies were published in three volumes: *Normal aging* (Palmore, 1970),

Normal aging II (Palmore, 1974), and *Normal aging III* (Palmore, Busse, Maddox, Nowlin, & Siegler, 1985). Among the scientists who designed, conducted, and published extensively from the DLS-I and DLS-II are Bud Busse, Carl Eisdorfer (second CFA director), George Maddox, John Nowlin, Walter Obrist, Erdman Palmore, Ilene Siegler, and Larry Thompson. Several themes emerged from that body of research and have been reinforced by subsequent studies of other samples.

First, the dynamics of aging can be accurately observed only by using longitudinal data that cover large portions of the life course. Even longitudinal data from a single cohort cannot generate accurate conclusions about aging. Multiple cohorts must be studied longitudinally to disentangle age changes from cohort differences. These were new insights in the mid-1950s and 1960s.

Second, no single discipline can adequately depict the aging process. Conversely, aging research approaches reality when skilled researchers from multiple disciplines work together to reveal how factors at many levels, ranging from the genetic to the societal, intertwine to shape the aging process. This is common knowledge now but was demonstrated by the Duke longitudinal studies and other early investigations.

Third, even in the absence of disease, aging is accompanied by overall physiological declines. By 1975, the Duke longitudinal studies demonstrated declines in physical functioning, vibratory thresholds, organic brain disease, EEG abnormalities, impaired cerebral blood flow, and sleep disturbances. General declines also were observed for some psychological/neurological factors, including memory and reaction time.

Fourth, social and most psychological resources remain high and stable until very old ages. Personality and general intelligence remain largely stable. Social patterns, including social relationships and life satisfaction, also remain generally stable until very late life. Disengagement theory proposed that late life is characterized by a mutual withdrawal of older adults from previous roles and relationships and of society as providers of those roles. This theory, based on cross-sectional data, was immensely popular. Findings from the Duke longitudinal studies refuted this theory by demonstrating that as people age, they typically sustain levels of social interaction and participation that characterized their middle years (Maddox, 1968).

Fifth, despite overall patterns of stability and change, the older population is highly heterogeneous.

Indeed, heterogeneity is greater in late life than earlier in the life course. As articles from the Duke longitudinal studies and elsewhere demonstrated—and continue to demonstrate—a myriad of factors can account for much of this variation. Examples of these factors include chronic illness, economic status, race/ethnicity, gender, and social stress.

Legacies of the Duke Longitudinal Studies

By current standards, the Duke longitudinal studies had significant limitations. The samples did not permit generalization to defined populations. Many of the scales and survey items seem almost primitive by today's standards. Nonetheless, these studies spawned important legacies for both the CFA and the field more broadly. The multidisciplinary scope of the studies, permitting examination of the associations of biological variables with psychological and social factors, was especially important.

For decades after the Duke longitudinal studies, investigators were forced to make trade-offs. Social factors and most psychological tests could be obtained from interviews with representative, community-based samples—but biological and physiological assessments were not compatible with those surveys. Conversely, biological specimens could be obtained from small samples of older adults who were willing and able to come to laboratories for data collection—but generalizability of the results of those studies was compromised. As a result of technological advances, however, studies that combined the representative samples of survey research and basic biological variables emerged in the 1980s.

The NIA-funded Established Populations for Epidemiologic Studies of the Elderly (EPESE) was one of the first research initiatives to combine survey research based on representative local samples with biological measurements obtained via blood, urine, and saliva. The EPESE program obtained data from four geographic sites, one of which was a five-county area in North Carolina. The basic design of the EPESE included four in-person interviews administered over a decade. Shorter telephone interviews were conducted in the years between in-person interviews. Mortality surveillance, based on the National Death Index, occurred both during and after the decade of interviews. Arrangements with federal agencies permitted the merging of EPESE survey data with participants' Medicare records.

A core interview was administered at all five sites, supplemented with site-specific data on topics

of particular interest to site investigators. Topics of special interest in the Duke EPESE, directed by Dan Blazer and Linda George, included detailed information on medication use; chronic and acute stressors; social relationships and support; religious participation; and psychosocial resources, including life satisfaction, self-esteem, and sense of mastery. A unique feature of the Duke EPESE is that African Americans were oversampled to comprise approximately 50% of the sample, with whites constituting the other half. This sampling strategy was ideal for analyses of both black–white differences and within race variability ($n = 4,162$). The Duke EPESE baseline interview was in 1986.

The Duke EPESE, like the Duke longitudinal studies, generated hundreds of publications by CFA investigators. Among the topics for which the Duke EPESE is best known are the effects of social support on buffering the effects of stressors on health outcomes, especially depression; religion and a variety of health outcomes, including physical health, depression, and mortality; patterns of medication use and misuse; the dynamics of cognitive impairment; trajectories of disability; and the effects of chronic inflammation (Blazer, Burchett, Service, & George, 1991; Cohen, Pieper, Harris, Rao, & Currie, 1997).

The EPESE program in general and the Duke EPESE in particular contributed to the broader field of aging research. Since the EPESE program, combining social survey and biological data in major longitudinal studies of aging has become common. The Health and Retirement Study, conducted by the Institute for Social Research at the University of Michigan, recently added physical measures and biological data to their study. Biodemography has emerged in aging research in developing countries as well, as evidenced, for example, in the Chinese Longitudinal Healthy Longevity Study, a seven-wave longitudinal study directed by CFA scientist Yi Zeng. Measurement innovations in the Duke EPESE also advanced the field. The method used to obtain accurate and detailed information about prescribed and over-the-counter medications became the standard for the field. The Duke Social Support Index was developed using EPESE data and has subsequently been used in more than 100 studies.

The Older Americans Resources and Services (OARS) Methodology

In the early 1970s, the CFA was funded by the Administration on Aging to study alternatives to

nursing home placement. Investigators, led by George Maddox (third CFA director) and Gerda Fillenbaum, recognized that this research required extensive information in two areas: the overall health and well-being of older adults and the need for and use of health and social services. They also recognized that appropriate assessment tools did not exist and would need to be developed. The result of their efforts was the Older Americans Resources and Services (OARS) methodology.

The OARS methodology was the first comprehensive geriatric assessment tool in the field and remains widely used today (Fillenbaum, 1988). The OARS consists of two major sections: multidimensional assessment of functional status and an assessment of both need for and use of services. Conceptually, CFA investigators were committed to developing a geriatric assessment tool that would (a) permit a common metric across multiple dimensions of well-being, (b) focus on impairment in functioning (noting, e.g., that individuals who had the same chronic disease varied widely in self-care capacity and quality of life), and (c) be flexible in providing both summary measures and useful subscales. The result was the Multidimensional Functional Assessment Questionnaire (MFAQ), which assesses impairment in five dimensions: social resources, economic resources, mental health, physical health, and activities of daily living (ADL). Summary measures for each dimension can be used in continuous metric or dichotomized into the impaired versus unimpaired using established cut points. Examples of subscales include ADL and instrumental activities of daily living scales, a social support index, and the Short Portable Mental Status Questionnaire.

The Services Assessment Questionnaire inquires about the extent, intensity of utilization, and perceived need for each of 24 nonoverlapping, broadly encompassing generic services. The metrics of the questions permit the construction of “service packages.”

The initial version of the OARS was administered to a representative sample of adults aged 65 and older in Durham, North Carolina ($n = 997$). In addition to describing rates of impairment and service need/use, extensive psychometric tests were performed to establish reliability and validity. These tests led to minor revisions of the OARS, generating its final form, which was published in 1974.

Legacies of the OARS Methodology

The OARS methodology has left an indelible mark on gerontology and geriatrics. Shortly after

its publication, the U.S. General Accounting Office used the OARS in a series of studies, mandated by Congress, to assess the health and well-being of older Americans, the unmet need for health and related services in the older population, and whether services reimbursed by Medicare and Medicaid were needed and cost-effective. One of the primary findings of these landmark studies was that at least 75% of the potential cost of long-term care services in the United States was provided to older adults by family members, rather than by government programs. This finding was instrumental in the subsequent emergence of research on the family caregivers of impaired older adults.

Literally hundreds of published studies are based on the OARS methodology—the vast majority of which were not authored by CFA scientists. Many of the studies were conducted on samples outside the United States and the OARS has been translated into more than 14 languages. Arguably even more important than the vast body of research based on the OARS methodology is the way that it changed the conceptualization of health and well-being in aging research. It is now taken for granted that functioning must be assessed in multiple dimensions (see, e.g., the SF-36) and that impairment is the key metric for geriatric assessment.

Other Landmark Studies

Space limitations preclude descriptions of the full range of innovative, landmark CFA studies. Two of those studies will be described briefly to demonstrate the continuation of CFA’s leadership in aging research.

Until the 1980s, survey-based studies of mental health were restricted to measures of psychiatric symptoms. Although these studies were valuable, they were of limited use in psychiatry and in needs assessment because a significant proportion of persons reporting psychiatric symptoms would not qualify for a Diagnostic and Statistical Manual of Mental Disorders (DSM) diagnosis of mental illness. This limitation was overcome with the publication of DSM-III and its clear articulation of the diagnostic criteria for psychiatric disorders, and the immediate development of standardized interview schedules that could be administered by trained lay interviewers. The National Institute of Mental Health funded Epidemiologic Catchment Area (ECA) program capitalized on these advancements. There were five ECA sites;

one of them was at Duke, directed by Linda George and Dan Blazer. The overall purpose of the ECA program was to provide valid estimates of the prevalence and 1-year incidence of mental disorders in the U.S. population. Population estimates were extrapolated from the results at the five demographically and geographically diverse ECA sites. Among the relatively unique features of the Duke ECA was a large oversample of older adults. Both previous and current studies of psychiatric symptoms report that psychiatric symptoms peak in young adulthood, are lowest in middle age, and increase at age 75 and beyond, albeit not to the peak levels of young adulthood. In contrast to these findings, the Duke ECA study documented that older adults have substantially *lower* rates of mental disorders than young and middle-aged adults (Blazer, Hughes, & George, 1987). This finding has been replicated multiple times since the 1980s, but CFA investigators were the first to report this pattern.

Although research on the caregivers of impaired older adults is a mainstay of aging research, the term “caregiver” did not appear until the mid-1980s. CFA investigators were among the first to identify the multiple ways that caregiving can affect the health and well-being of caregivers. George and Gwyther (1986) was the first article to compare caregivers and age-matched non-caregivers on multiple dimensions of health and well-being. The sparse caregiving research to that time focused on the mental health consequences of “caregiver burden” and was based on samples restricted to caregivers thus precluding conclusions about how caregivers compared with their noncaregiving peers. The CFA study documented that caregivers averaged lower levels of well-being than noncaregivers in multiple dimensions, including physical health, economic resources, social activities, and mental health. Although we did not use the MFAQ in its entirety, the OARS methodology was the conceptual underpinning of well-being in that study. By the end of the 1990s, the George and Gwyther’s article had been certified a “citation classic” and continues to contribute to the knowledge base.

And the Beat Goes On

The Duke CFA continues to invest in large, multidisciplinary research initiatives. Two of these, for which the Duke CFA is especially well-known, are described here.

The Claude D. Pepper Older Americans Independence Center

Duke’s Older Americans Independence Center (OAIC) was initially funded in 1992 and is currently in its third phase of funding. The purposes of OAICs, funded by NIA, are to enhance research and research training in geriatrics, with a particular focus on maintaining the independence of older people. The Duke OAIC, directed by Harvey Cohen, fourth and current CFA director, has focused on multidisciplinary research, both basic and applied, and rigorous clinical trials of interventions to sustain and improve the functioning of older adults. Early research at the Duke OAIC focused on maintenance of physical function in the frail elderly participants with severe osteoporosis, nursing home residents, community-dwelling elders, and those with early stage Parkinson’s disease (Morey et al., 1996). Subsequent research has included maintenance of physical functioning in frail elderly participants with other chronic conditions. An example of OAIC clinical trials research is an early intervention study that used a behavioral approach to lifestyle modification and subsequently led to the largest clinical trial to date aimed at improving function in long-term cancer survivors (Morey et al., 2009).

More recently, the Duke OAIC has emerged as a leader in metabolic profiling of older adults and has identified an age-related disruption in the metabolic transport system that contributes to poor physical function (Lum et al., 2011). This observation, first identified in animal models, has been replicated in humans. Ongoing studies focus on a promising nutritional supplement that offsets the metabolic dysregulation in animal models. The Duke OAIC also developed new statistical models and biological assays that have been widely disseminated to the scientific community. In its 20-year history, hundreds of articles based on Duke OAIC research have been published.

Geriatric Assessment

In the early 1970s, physicians affiliated with the CFA expressed the desire to establish an outpatient clinic for older adults. The assessment procedures were to be comprehensive, including the five functional dimensions of the MFAQ. Patients would be assessed by a multidisciplinary team involving a geriatrician, a psychiatrist or psychologist, a nurse, and a social worker. Family members of the patients were to be interviewed and involved in treatment plans to the extent possible. The Geriatric

Evaluation and Treatment Clinic (GET Clinic) was established and became a national model for geriatric assessment of older outpatients (Moore, Warshaw, Walden, Rask, & Clapp-Channing, 1984). The GET Clinic remains a model program and has served more than 10,000 older adults.

Beginning in the 1980s, under the leadership of Harvey Cohen, CFA investigators conducted a series of pivotal studies of geriatric assessment, including a randomized controlled trial (RCT) of Geriatric Consultation Teams, the largest RCT of Geriatric Evaluation Units and Clinics, and the application of geriatric assessment methodology to older cancer patients (Cohen et al., 2002; McVey, Becker, Saltz, Feussner, & Cohen, 1989).

Other Duke CFA Initiatives

Model Service Programs

Three CFA service programs have been especially successful and serve as national models. The Duke Family Support Program, developed and directed by Lisa Gwyther, is a technical assistance program for the caregivers of persons with Alzheimer's disease and other dementing illnesses and became a national model for caregiver support services. Core components of the program include caregiver support groups, a newsletter, an annual conference on advances in research, and opportunities for caregivers to interact one on one with both professionals and other caregivers.

In the early 1970s, the Duke CFA collaborated with the Duke University Continuing Education Program to establish a program for older adults. Originally named the Duke Institute for Learning in Retirement (DILR), this program was immediately popular. Some participants serve as instructors for the wide range of courses offered each semester; in other cases, Duke faculty voluntarily teach courses in their areas of expertise. At any point in time, approximately 800 older adults are enrolled in courses and many report that they relocated to this area, in part, because of this educational program. DILR became the national model for older adult education programs in general and the Osher Foundation Lifelong Learning Institutes (OLLIs) in particular. DILR is now known as the Duke OLLI.

In 1985, George Maddox established the Long-Term Care Resources Center to provide technical assistance to North Carolina communities interested in developing services that would enable their older citizens to age at home. Funded by several foundations, this program included small grants

to communities, providing seed money to expand their range of services; conferences emphasizing proven methods of building community support for aging initiatives; and the development of training manuals and other materials that empowered policy planners and service providers to assess the needs of older adults and plan appropriate services to meet those needs.

Generating New Research Centers

Some research programs that began in the CFA grew so large that it was appropriate for them to separate from the CFA. Two examples are the Alzheimer's Disease Research Center and the Center for the Study of Spirituality, Theology and Health. Duke's early studies of Alzheimer's disease, under the leadership of Allen Roses, began in the CFA and included autopsy tissue from DSL-I and DSL-II research participants and genetic profiles from Duke EPESE participants (for a review of those pioneering studies, see Roses, 1996). Similarly, Harold Koenig's extensive research on the relationships between religion/spirituality and health began with extensive analyses of the Duke ECA and Duke EPESE data.

Training

The Duke CFA was among the earliest to offer training opportunities at the postdoctoral, graduate, and undergraduate levels. Because of space limitations, only the two oldest and best-known programs are briefly described.

The Postdoctoral Research Training Program began in 1966 and is now in its 46th year. This was the first postdoctoral training grant awarded by NIH, which continues to fund it. During the first decade, the training grant also funded graduate students in sociology, psychology, and economics. The purposes of the postdoctoral fellowships are to acquire training in the multiple disciplines engaged in aging research, obtain advanced research skills, and perform independent aging research of publishable quality. The CFA has sponsored more than 200 postdoctoral fellows and more than 40 predoctoral fellows from a wide range of disciplines. Many of them have exemplary careers in aging, contributing important research advances, serving as leaders in the field, and training new generations of gerontologists and geriatricians.

The Geriatrics Fellowship Training Program is a joint initiative by the Duke CFA and the Geriatric Research, Education and Clinical Center

(GRECC) at the Durham Veterans Administration Medical Center. These fellowships provide fellows with extensive clinical and research experience in geriatrics and prepare them for board certification. In its 33-year history, the fellowship program has graduated 113 geriatricians, 60% of whom work in academic health centers, many of whom hold leadership positions.

Space limitations preclude naming the graduates of CFA training programs who have become distinguished gerontologists and geriatricians. The list reads like a “Who’s Who” of aging research and includes professors in more than half of the U.S. states.

National Leadership

CFA faculties have had the honor of leading the major professional societies in aging. Six CFA faculty—Bud Busse, Carl Eisdorfer, George Maddox, Linda George, Harvey Cohen, and Lisa Gwyther—served as president of the Gerontological Society of America (GSA). Three presidents of the American Geriatrics Society (AGS) were CFA faculty: Bud Busse, Dan Blazer, and Harvey Cohen. Several scientists trained at CFA also were GSA and AGS presidents. Other CFA scientists have held major offices in the Association for Gerontology in Higher Education and the Southern Gerontological Society.

Final Thoughts

The CFA is truly the home for Duke scientists and students who study aging, devote their clinical energies to older adults, and seek training to pursue exemplary careers in aging. Thanks to the vision of the CFA’s original leadership, barriers to multidisciplinary research that are common in many universities largely do not exist at Duke. Indeed, we are proudest of the large multidisciplinary projects that constitute much of the CFA’s history. Much of that pride is a result of the ways that the methods developed and research conducted at the Duke CFA have contributed to the emergence and success of gerontology and geriatrics. Paraphrasing the quote from Sir Isaac Newton, which hangs in the office of the CFA director, “We stand on the shoulders of giants!”

This is an appropriate tribute to the many scientists, clinicians, and administrators who built the CFA in a way that sustains our efforts to this day and beyond.

Acknowledgments

The authors gratefully acknowledge the visionary scientists who established the Duke Center for the Study of Aging and Human Development, the many innovative scientists who have contributed to our mission for the past 57 years, and, especially, the thousands of older adults who graciously participated in our research.

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