



# OBSERVER

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## HUMAN CAPITAL INITIATIVE

# Vitality for Life:

Psychological Research for Productive Aging

*... by the year 2025 ... 20% of the United States population will be over age 65 compared to the current 12%. The years 2010 to 2030 will see an enormous increase—the numbers of people over age 65 will increase by 73%, while the population under 65 will decrease by 3%!*

VITALITY FOR LIFE COMMITTEE

*It is imperative that we develop the scientific expertise to cultivate older adults as a national resource ...*

VITALITY FOR LIFE COMMITTEE

The Ottawa Sun



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# PREFACE

## The Graying of America: An Aging Revolution In Need of a National Research Agenda

John C. Cavanaugh and Denise C. Park  
*Co-Chairs*  
*Vitality for Life Committee*

A silent revolution is occurring that is literally changing the face of the nation forever. The revolution is *aging*. The United States is part of a worldwide demographic shift in which the fastest growing segment of the population is not only older adults but specifically those over age 80. The revolution goes by various names (e.g., the “graying” of America is a popular one), but there is total agreement on one thing: it brings with it many serious challenges as well as numerous opportunities.

Despite the many scientists, writers, and commentators who have been heralding the revolution for several years, the United States has done little to address some of the most important consequences of an aging population. Even in the midst of on-going debate concerning the future of health care, not enough attention is being paid to identifying ways to change behaviors that improve older adults’ health and reduce the cost of care. In the face of rapidly increasing numbers of the oldest old, little has been done to understand psychological functioning in very late adulthood in order to document normal versus abnormal behaviors. Despite the removal of virtually all mandatory retirement rules, virtually nothing has been done to understand the needs of older workers or how to maintain their productivity. Finally, the mental health needs of older adults also have been neglected, in part because of a proclivity to view psychopathology as either part of the normal aging process or as medical disorders.

### Developing a Research Agenda

It was in this context that representatives from 24 behavioral science agencies and organizations met on March 21 and 22, 1993, to formulate a national research agenda to address these pressing and urgent needs. This workshop was initiated and sponsored by the American Psychological Society. Other sponsors include the American Psychological Association, the American Association of Retired Persons, the National Institute on Aging, the National Institute of Mental Health, and the National Science Foundation. A drafting committee prepared a detailed outline and initial working document prior to the workshop. Workshop participants provided feedback

and additional initiatives, and the revised document was widely circulated for comment and review.

The workshop participants and subsequent reviewers considered and thoroughly discussed many aspects of aging but recognized the need to articulate clear priorities in order to maximize the likelihood that the plan would be read and adopted by policymakers. Clearly, this strategy meant that many important topics would be omitted. The *Vitality for Life* document represents the collective judgment and the achievement of consensus of behavioral scientists of many stripes about both basic and applied research priorities in the psychology of aging, an important feat in itself. We believe that the four areas chosen—health and behavior, functioning of the oldest old, productivity of older workers, and specific issues in mental health and well-being—reflect important social issues for which psychological research can produce solutions that will ultimately improve the quality of people’s lives.

### Research Agenda Already Has Made an Impact

*Vitality for Life* already has been used as a basis for scientific advocacy for research funding in the psychological sciences. A group of psychologists presented the document to Richard J. Hodes, Director of the National Institute on Aging, as well as to several key congressional staffers in October. A total of 24 behavioral science agencies and organizations and divisions have endorsed it. We believe that the document will be a vital resource in continuing efforts to increase funding for behavioral research as well as to refocus behavioral science research priorities in aging.

We hope that you will read the *Vitality for Life* carefully and consider how your own work is connected with the priorities identified here. Additionally, we hope you will support not only this initiative but the overall aim of using the Human Capital Initiative in advocacy efforts to increase funding for behavioral science research. We believe the behavioral research espoused in *Vitality for Life* provides a coherent agenda for how both basic and applied psychological research can enhance the quality of life for older adults.

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Cambridge Center for Behavioral Studies	Society for Computers in Psychology
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Counseling Psychology	Society for Personality and Social Psychology
Evaluation, Measurement and Statistics	Society for Psychophysiological Research
Experimental Analysis of Behavior	Society for a Science of Clinical Psychology
Experimental Psychology	Society of Multivariate Experimental Psychology

## ACKNOWLEDGMENTS

***Vitality for Life: Psychological Research for Productive Aging*** is the result of collaboration among representatives from 24 organizations. A drafting committee (Vitality for Life Committee) prepared a detailed outline and initial working document in response to a Call for Participation (see February 1992 *APS Observer*). This working document guided further refinements at an APS-organized workshop held in Reston, Virginia, on March 21-22, 1993. Workshop participants provided feedback and additional initiatives. The final text was circulated for review and approval by all workshop participants and an additional group of representatives named by the sponsoring or participating organizations.

The **Coordinating Committee for the Human Capital Initiative** gratefully acknowledges grant support from the National Institute of Mental Health to the American Psychological Society for aid in elaborating the Human Capital Initiative, and also from Bowling Green State University. Additional support for travel was provided by many of the sponsoring organizations. We thank Alan Kraut, Sarah Brookhart, Lauren Butler, and Lee Herring, all from the American Psychological Society, for their assistance in this work.

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# Human Capital Initiative Background

For the past two and a half years, the psychological science community has been developing a national behavioral science research agenda that illustrates the potential of behavioral science research to address several critical areas of concern to this country. The first stage of the process began in January 1990 when a group of more than 100 individuals representing almost 70 psychological organizations and additional federal agencies gathered in Tucson, Arizona, for what was to be the first of several Behavioral Science Summit meetings. Convened under the sponsorship of the American Psychological Society with partial support from the National Institute of Mental Health (NIMH), the summit conferees unanimously endorsed the development of a research agenda that would help policymakers in federal and other agencies set funding priorities for psychological and related sciences.

The result of this first stage is the *Human Capital Initiative* (HCI) document. Published in February 1992, the HCI is designed as a framework for a sustained research effort. It targets six problems facing the nation, communities, and families and describes these issues in terms of psychological research. The six research priority areas are:

- ◆ Productivity in the workplace (*Changing Nature of Work*)
- ◆ Schooling and literacy
- ◆ The aging society (*Vitality for Life*)
- ◆ Drug and alcohol abuse
- ◆ Health
- ◆ Violence in America

Not a day passes without one or more of these concerns grabbing the national news headlines. While these six topics are not the only challenges facing the country, each by itself seems nearly overwhelming. Each presents difficult dilemmas, and each is a problem of human behavior.

Each of these six urgent challenges is addressed in *The Human Capital Initiative* (1992). Developed by representatives from 68 behavioral, psychological, and cognitive science organizations—with a net total membership well over 100,000—*The Human Capital Initiative* describes in general terms both the nation's problems and potential contributions of research.

The Human Capital Initiative has now entered a second phase. Using the HCI document as an umbrella structure, groups of individual investigators who represent their scientific societies are being brought together to develop specific research initiatives. The six areas of broad national concern in the Human Capital Initiative are not meant to limit the specific research initiatives that might come forward. Rather, they are intended to serve as starting points to stimulate research that adds to both theoretical and practical knowledge of these and other crucial issues. The document that follows is the second document produced in a series of six. The first was on the topic of work (*Changing Nature of Work*); the current document sets research priorities for aging. The pages that follow are the product of the drafting committee for the Vitality for Life initiative.

The Human Capital Initiative Coordinating Committee and the Vitality for Life Drafting Committee gratefully acknowledge support—for the preparation of this initiative—from the American Psychological Society, American Psychological Association, American Association of Retired Persons, National Institute of Mental Health, National Institute on Aging, and National Science Foundation. This support was in addition to the leadership provided by the American Psychological Society in organizing this conference. Additional support for travel was provided by many of the sponsoring organizations.

The Vitality for Life drafting committee Co-Chairs would like to thank Alan Kraut, Lee Herring, Sarah Brookhart, and Lauren Butler, all from the American Psychological Society, for their assistance in this work. In addition, significant leadership and assistance was provided by Milt Hakel, Chair of the Human Capital Initiative Coordinating Committee. ◆

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# HUMAN CAPITAL INITIATIVE

## REPORT OF THE

### Vitality for Life Committee

## Executive Summary: A Call to Arms

The population of the United States is aging. Coming to grips with this profound demographic change requires a much greater understanding of the aging process and how to maintain productivity in older adults. *Vitality for Life: Psychological Research for Productive Aging* represents the combined efforts of behavioral researchers representing 24 organizations. It is a call to arms on key issues that society will confront as America ages. There are four specific areas in which behavioral research will provide essential information to aid us in confronting the dramatic demographic changes that are occurring in our society.

Intensive research and funding efforts are recommended for the following areas:

- ◆ **HEALTH:** Understanding and changing health behaviors to promote productive aging.
- ◆ **THE VERY OLD:** Developing strategies to optimize the functioning of the oldest old and to maintain independent behaviors.
- ◆ **WORK:** Understanding how to maximize and maintain productive work behaviors into late adulthood.
- ◆ **PSYCHOLOGICAL WELL-BEING:** Developing assessment and treatment strategies for mental disorders in later life to maintain vitality.

**PRIORITY ONE: HEALTH.** We must develop an understanding of how to change behaviors which damage health and how to maintain behaviors which promote health. This will result in productive aging. (a) **Although longevity has increased in past years, quality of life has not necessarily shown a similar increase. Improving health behaviors will prevent disability and maintain quality of life into late adulthood. We need more work to determine the most effective level of interventions for health behaviors and to determine under what conditions individuals**

**become motivated to change health behaviors. (b) Existing research has shown that there is a powerful link between health and behavior. People who fare well with chronic and even potentially fatal diseases have different perceptions and beliefs about their illness. We need to know more about the relationships among age, beliefs, and illness outcomes, as well as medical decision-making, and how treatment choices are selected. (c) Older adults frequently take multiple medications and may have more difficulty adhering to treatment regimens. We know that the oldest-old have the highest rate of nonadherence, and we must design interventions to improve rates of medication adherence and decrease disability.**

**PRIORITY TWO: THE VERY OLD.** We can optimize the psychological function of the oldest-old (those 75 and older) through both basic research and practical interventions. This will minimize costs of frailty and disability. **The oldest-old are the most rapidly growing segment of our society. One in four is in a nursing home and an additional 45% need assistance with tasks of daily living. (a) We know very little about psychological functioning of the oldest-old, although more is known about young-old. We must conduct basic research to determine changes that occur in**

***We can optimize the psychological function of the oldest-old (those 75 and older) through both basic research and practical interventions. This will minimize costs of frailty and disability.***

VITALITY FOR LIFE COMMITTEE

mental abilities in very late adulthood. (b) We have some effective techniques isolated from laboratory research for supporting cognitive function, but these have not been tried with very old adults. We need to test these interventions and develop additional ones. (c) The oldest-old lose independence through reduced mobility and ability to drive. There is exciting research indicating that accident rates can be predicted by perceptual tests. We must build on this research and develop effective techniques for screening drivers, as well as for training those who are dysfunctional.

**PRIORITY THREE: WORK.** As our work force ages, we will find that we must use older adults as an important resource to maintain the vitality and productivity of our work force. (a) We know that older adults' sensory and cognitive capabilities decline with age, but we do not understand how these changes affect performance in the work place. (b) We also know that older workers typically perform as well as young adults in most work environments. We need to understand strategies that highly successful older workers use to support their work behaviors. (c) We need to determine what contributes to decisions to retire or not to retire and how the work role in the family shifts with increasing age.

**PRIORITY FOUR: MENTAL HEALTH.** We must develop better techniques for assessing mental health and appropriately treating mental disorders in older adults. This will provide older adults a better chance to achieve vitality throughout their lives. (a) We know that the majority of older adults do not have mental disorders, despite coping with health changes and other losses. We need to know what organized interventions might support such effective coping with distress. (b) Approximately 48% of adults over age 85 experience some type of cognitive loss, with Alzheimer's disease the most common problem. We urgently need to develop better strategies to detect early stage cognitive disorders. (c) Depression is one of the most common disorders of late adulthood. We need to determine the relationship between depression and brain chemistry in late adulthood as well as why a disproportionate number of older adults commit suicide.

The time has come to declare behavioral research on aging a major national priority. The country cannot afford to wait until the next century to address the issues raised by the surge in the older population. We must act decisively now. It is clear that psychologists can offer a great deal to increase human productivity and vitality in late adulthood. Psychologists' understanding of issues such as health, work, the oldest-old, and mental disorders strategically places psychology at the forefront of scientific investigations of aging. It is only by investing in behavioral research on aging that we will advance our understanding of many aspects of aging and find solutions to behavioral problems faced by older adults in their everyday lives. Investing in the psychology of aging is investing in vitality for life. ♦

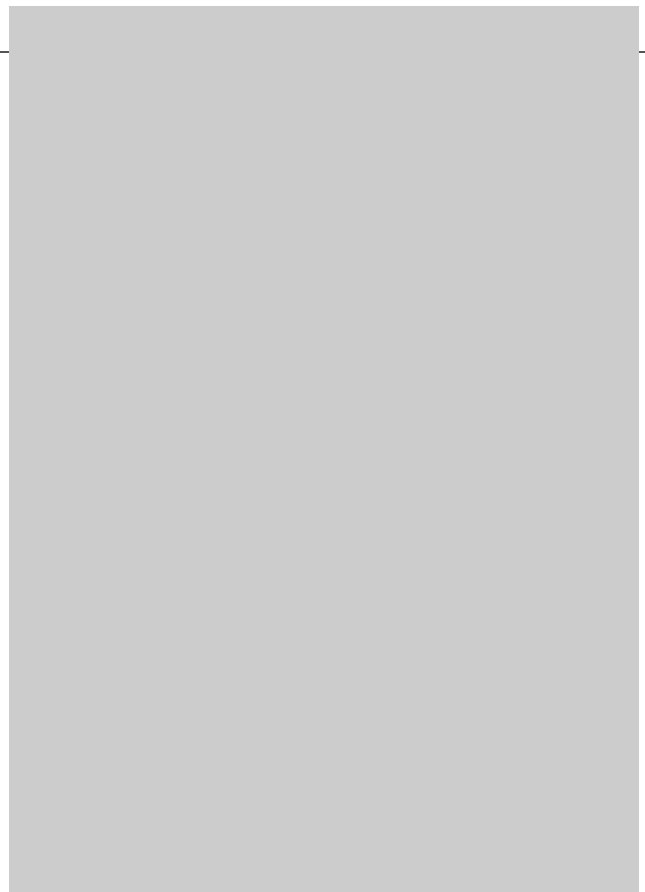


Photo by Linda Bartlett

*We must develop an understanding of how to change behaviors which damage health and how to maintain behaviors which promote health.*

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# Introduction

The United States is undergoing a silent revolution: the aging of its population. This revolution requires that we dramatically increase efforts to understand the social and economic impact of this massive demographic change. This document is a call to action: ***We must make productive aging a national priority.*** It is imperative that we develop the scientific expertise to cultivate older adults as a national resource to sustain human vitality across the adult life span into old age and ensure quality of life. To do this requires a significant commitment of funds for behavioral research on aging. Investment now in the behavioral science of aging will result in major advances in our ability to address the major individual, social, and economic issues that will confront our society as our population ages.

◆ **Aging is a behavioral issue.** The purpose of this document is twofold. First, a strong case can be made that many issues related to aging are behavioral problems that are best addressed within a behavioral research framework. Much of the untapped potential of older adults to maintain sustained vitality and productivity can best be realized through basic behavioral research and behavioral interventions. Second, evidence is presented that psychologists are capable of making important contributions and achieving solutions to the challenges of aging in our society. We must act now to make the challenges and problems of our aging society a national priority by directing substantially more research dollars towards the agenda outlined here. It makes sound fiscal sense to act now rather than to react later.

◆ **The numbers are clear—the population of aged adults is increasing more rapidly than ever before.** The proportion of adults in the United States over age 65 is the largest in history and will continue to grow rapidly over the coming decades. Overall, by the year 2025, it is estimated that 20% of the United States population will be over age 65 compared to the current 12%. The years 2010 to 2030 will see an enormous increase—the numbers of people over age 65 will increase by 73%, while the population under 65 will decrease by 3%! The growth of the population aged 85 and older is even more dramatic, the size of this group is increasing at much higher rates than any other segment of U.S. society.

◆ **Aging is marked by gender and ethnic differences.** Due largely to longer life expectancies, aging is disproportionately a women's issue. The vast majority of the oldest old—those over age 80—are women, many of whom are frail and suffer from chronic illness. Ethnic diversity is also an important issue. The number of older ethnic minority adults is increasing more rapidly than for the population as a whole. Throughout this document, we emphasize the need to examine gender and ethnic differences in all aspects of aging.

## The science of psychology offers solutions to key societal problems.

Psychologists bring an important perspective to solving social problems by considering individuals in the context of their entire life span rather than only at a certain static point in development. Psychologists view people as members of complex and dynamic social units consisting of multiple generations within families, acquaintances, and friendships, as well as social systems. Psychologists recognize and incorporate differences across individuals, cultures, and generations into their explanations of behavior, and believe that diversity is integral to the human experience. They focus on identifying connections between the physical and the behavioral aspects of the person in ways that explicate these link-ages.

## Psychologists have already produced cost-effective and highly successful behavioral solutions to many societal problems of aging.

Psychologists already have a century-old tradition of success in solving social problems, built upon a firm foundation of basic research. The challenge is to understand how basic research complements more clinically oriented studies in order to achieve a beneficial balance between the two that is beneficial for older adults. Three simple examples can illustrate how basic research has led to solutions for practical problems associated with aging.

The first example focuses on basic research on age differences in visual attention. This research led directly to the development of a simple computerized test that can reliably assess older drivers at risk of having an accident,

providing the basis for age-fair assessments of at-risk drivers. These tests will increase our ability to identify drivers who may threaten other members of society as well as themselves. Plans also are under way to train at-risk drivers to improve their attentional and visual functioning in order to lower their risk of accidents.

A second example of success is that we are beginning to understand how to make an early diagnosis of Alzheimer's disease based on behavioral criteria. Better understanding of basic cognitive processes such as memory and judgment has resulted in screening tests and diagnostic procedures that have improved clinicians' ability to differentiate treatable disorders (such as depression) from irreversible disorders (such as Alzheimer's disease) early in the course of the disorder so that appropriate interventions can be implemented in each case.

A third example of success is the behavioral management of incontinence, a problem that can create high levels of stress for family members and patients, often resulting in institutionalization. Basic research on behavioral principles in behavioral management has produced highly effective treatments that work with a wide variety of clients. Today, behavioral intervention is the treatment of choice for this problem.

**To achieve the goal of vitality for life, the following research priorities must be addressed:**

1. We must develop an understanding of how to change behaviors which damage health and to maintain behaviors which promote health. This will result in productive aging.
2. We must recognize that we can optimize the psychological functioning of the oldest-old through both basic research and practical interventions. This will minimize costs of frailty and disability.
3. We must begin to understand how to maximize productivity and how to maintain productivity into late adulthood. This will allow us to tap the wealth of older people's experience, wisdom, and expertise.
4. We must develop better techniques for assessing mental health and appropriately treating mental disorders in older adults. This will provide older adults a better chance to achieve vitality throughout their lives. ♦



Linda Bartlett

***We must begin to understand how to maximize productivity and how to maintain productivity into late adulthood.***

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# CHAPTER 1

## Priority 1

**We must develop an understanding of how to change behaviors which damage health and to maintain behaviors which promote health. This will result in productive aging.**

Both the cost of health care and the number of older adults using this care are increasing rapidly. The percentage of national resources spent on health care services in the United States surpasses all other countries, to a point where health care expenses are threatening our standard of living as a nation if they continue to grow unchecked. Older adults consume the majority of medical services and prescription medications in the United States, so any improvements in cost-effective treatments that are directed toward the older adult population will have a large impact. A high percentage of older adults (86%) suffer from one or more chronic conditions that require ongoing lifetime medical treatment. Much is known about how to decrease risk and morbidity associated with chronic disease, and the most effective health management often involves a behavior change in diet, exercise, or even coping style. Nevertheless, very little attention has been paid on how to promote behaviors that decrease utilization of medical services and maintain health and productivity into late adulthood. Research on how to promote behaviors that are effective in coping with existing diseases and preventing more illness is needed and would be cost-effective. The psychological research community has both the basic research expertise and the commitment to address this critical research need.

### Problem 1

**Although we have increased longevity, we have not necessarily increased the quality of life, particularly in the later years.** This stage of life is all too frequently characterized by multiple health problems and frailty. It is important to establish health prevention and promotion behaviors across the life course for sustained vitality and productivity in late adulthood. The prevention of undesirable behaviors such as smoking and excessive eating early in the life course, and the promotion of health behaviors like exercise and good nutrition at any point in life, will enhance successful adaptation during late adulthood.

- ◆ **WHAT WE KNOW. Effective behavioral interventions have been developed to promote health behaviors in older adults.** For example, it has been reliably demonstrated that adherence to an exercise regimen improves mental health and a sense of well-being in older adults, as well as providing obvious physical benefits.

Interventions on entire communities have been successful in increasing exercise and other health behaviors in older adults. Other researchers have demonstrated that behavioral techniques can be used to increase immunizations for influenza, a disease that can be fatal to an older adult. Computerized telephone reminders have been shown to increase the rate that older adults keep medical appointments, thus enhancing prevention behaviors and using physician time more effectively.

- ◆ **WHAT WE NEED TO KNOW. We need to determine the most effective techniques for promoting permanent change in adaptive health behaviors in older adults.** For example, although poor nutrition is believed to be an important factor in frailty and disease vulnerability in elderly adults, little is known about how to enhance nutrition. It is also not known what the most effective target for intervention strategies is. Should interventions occur at the level of the individual, the work force, or even a whole community? There is some evidence that some types of interventions are more effective when focused on groups rather than individuals. More work must be done on the psychological conditions under which individuals become motivated to change health behaviors, the role of spouses and support systems in adopting changes, as well as the most effective settings and types of interventions that result in changes.

### Problem 2

**Late adulthood, particularly the last years of life, may be characterized by limited choices, pain, and dependence, conditions which psychological research can address more effectively than research based on the medical model of disease.** Common problems that can occur in late adulthood include chronic pain; poor sleep habits which contribute to a low quality of life; and increasing dependence on others due to frailty. The best solutions to these problems are often behavioral rather than medical.

- ◆ **WHAT WE KNOW. Psychological research suggests that one's psychological state and the perception of control in later life may play a critical role in illness outcome and survival, attesting to the powerful relationship between health and behavior.** There is convincing evidence that older adults who are institutionalized against their will are at a much higher risk of death shortly after institutionalization than older adults who chose the institution as the most attractive alternative available to them. Similarly, there is some evidence that



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***Older adults frequently take multiple medications, but they may have more difficulty adhering to a treatment regimen than young adults and they are also more likely to suffer adverse drug reactions, both physical and behavioral.***

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individuals who have certain personality characteristics, or who adopt strong belief systems about illness outcomes may enhance their chances for survival from life-threatening illnesses. It has also been demonstrated that biofeedback and other behavioral techniques are effective therapies for pain management.

- ◆ **WHAT WE NEED TO KNOW.** **We know very little about the relationships among age, illness, belief systems, and disease outcomes.** Although increasing attention is being paid by the popular press to the role of psychological adjustment, coping strategies, and well-being when individuals are faced with life-threatening illness, this remains virtually an unexplored frontier with respect to outcomes in late adulthood. Also, there is strong evidence that people with the same medical symptoms often have very different outcomes. For example, individuals with equally severe joint damage associated with arthritis will have very different experiences of pain and may differ dramatically in the amount of medical intervention required to manage their treatment. We need to understand why this is the case, and learn how to guide and control the subjective experience of pain. Because the understanding of how the individual patient conceptualizes illness is essential for effective treatments, both medical and psychological, we also need to examine the role of gender and ethnicity in the way individuals think about and cope with illness. Finally, we must learn how to provide better health care for frail elders that does not rely solely on medicine and nursing home models. For example, there have been some very successful respite programs where a few beds in a nursing home are set aside for caregiving families to use occasionally. Such programs allow brief, planned stays for older patients and permit many family caregivers to rest, get medical care for themselves, etc. Such programs have been shown to increase caregivers' satisfaction and may prevent or postpone permanent institutional placement, thereby increasing patients' quality of life and reducing health care costs.

**Problem 3**

**Older adults frequently take multiple medications, but they may have more difficulty adhering to a treatment regimen than young adults and they are also more likely to suffer adverse drug reactions, both physical and behavioral.** Approximately 34% of older adults take three or more prescription medications. It is not uncommon to encounter older adults with multiple chronic conditions taking eight or more medications simultaneously. Due to age-related changes in cognitive processes, as well as greater susceptibility to adverse drug reactions due to slowed clearance of medication, the correct usage of medications represents a serious problem for older people.

- ◆ **WHAT WE KNOW.** **The highest rate of medication nonadherence is observed in the oldest-old, the individuals most likely to have multiple chronic**

**conditions.** For the first time, accurate measurement of medication adherence is possible through the use of subtle microelectronic devices. Although research has shown that the oldest-old do have the highest rates of nonadherence for a variety of conditions, studies have also indicated that adherence in this group can be raised to the level exhibited by younger adults with the help of external supports. Older adults who received charts that organized complex regimens and who also received medication organizers that partitioned the medications as they were to be taken for each day improved adherence behaviors substantially. Other research has shown that older adults have more trouble comprehending and remembering medication information than young adults, but that redesigning labels and information produces benefits. Also, research by psychopharmacologists has indicated that older adults are hypersensitive to drugs and respond to them in more variable ways than young adults.

- ◆ **WHAT WE NEED TO KNOW. We need to understand how medication adherence is related to age changes in cognitive function and also to beliefs about illness and disease.** Correct usage of medications is a cognitive behavior that is also related to beliefs about disease and illness. We need to understand how declining cognitive function with respect to comprehension and memory can affect the ability to understand a medication regimen as well as the ability to remember to take medications correctly. More research on how to improve adherence is needed in order to increase the effectiveness of treatment and to prevent hospital admissions due to inappropriate use of medications. The role of spouses and others as informal memory aids for declining cognitive function needs to be addressed in this context. Also, we need to understand how belief systems about illness relate to whether older adults take medications, and how to change beliefs that are not congruent with correct adherence. In addition, the relationship between adherence behaviors and perceived well-being needs to be assessed. Finally, behavioral psychopharmacologists need to document the side effects and behavioral deficits produced by various combinations of drugs typically used by older adults, an area that is little understood and where animal models of behavior would be useful. Research aimed at identifying specific side effects of psychoactive drugs and at identifying psychoactive drugs particularly effective for older adults is needed.

#### Problem 4

**Older adults are frequently confronted with complex decisions regarding medical treatment, advanced directives, or other advice, but little is known about how to present this information to older adults and how decisions are made.** Although there are laws governing patients' rights and what information a patient must be presented before making decisions about medical care, there are no standards to assess how to present this information to older adults or to determine what an individual understands about his/her

medical situation. For example, in 1992 the Patient Self-Determination Act was implemented, and it requires that all patients admitted to a hospital or nursing home be presented with information regarding completion of a living will and designation of power of attorney for medical decisions. There is no requirement, however, that hospital personnel assess whether patients understand the information presented.

- ◆ **WHAT WE KNOW. Recent evidence indicates that older adults are more likely to seek treatment than are younger adults for the same symptoms, suggesting that there are important age-related differences in decisions to seek treatment.** Also, there are troubling findings regarding advanced directives where an older adult designates a proxy for medical decisions. When presented with hypothetical situations, patients and their designated decision-maker show low agreement on how the decision-maker should act to continue or to terminate the patient's life. Thus, these data suggest that some patients might die when they prefer to live and others might live when they prefer to die.
- ◆ **WHAT WE NEED TO KNOW. At present, little is known about how patients comprehend information about their various medical conditions or about their understanding of the treatment alternatives available to them.** Moreover, it is not clear with respect to the Patient Self-Determination Act whether patients are able to understand the materials presented, are distressed by the decision with which they are presented, and how the law has affected the completion of living wills and designation of a durable power of attorney. Little is understood about why patients and families disagree with respect to medical decisions and how this information is communicated inter-generationally. In addition to research on these issues, there is a need to understand how to develop effective materials to facilitate medical decision making for patients with limited education or declining cognition. More concern needs to be shown for how to include cognitively impaired older adults in medical decision processes, drawing upon basic research in cognitive supports. There is also a critical need for understanding the context in which active and passive euthanasia occurs and the development of psychosocial models for understanding the complex reasoning (in patients, families, and physicians) that underlies increasingly strong public sentiment that patients have the right to make choices about euthanasia. These mental models underlie life and death decisions and they need much more attention by behavioral researchers. ◆

# CHAPTER 2

## Priority 2

**We must recognize that we can optimize the psychological functioning of the oldest-old through both basic research and practical interventions. This will minimize costs of frailty and disability.**

The oldest-old, those aged 80 and older, is the most rapidly growing segment of our society. This growth in the number of adults in the 80 and older category, the majority of whom are women, is perhaps the most dramatic and most problematic aspect of the demographic changes in the United States population. One in four of the oldest-old is in a nursing home. Of the remaining 75% who are not institutionalized, 45% need assistance in the performance of everyday activities. An estimate of 20 to 25% of the oldest-old suffer from Alzheimer's Disease. Moreover, there is convincing scientific evidence that even the healthy, productive members of this age group experience significant levels of decline in their ability to function adequately in everyday activities. First, there are significant declines in cognitive functioning of older adults. Accompanying these cognitive changes are significant decreases in the quality of social support for oldest-old adults because of the decreasing number of family and friends in their social networks. Finally, reduced psychological well-being may accompany the typical losses in this age group: losses in physical health, losses of social companions, and loss of economic security. This reduced functioning leads to greater societal costs, including the costs of long-term care and institutionalization. Moreover, institutionalization in this age group often exacerbates the problems of psychological functioning rather than reducing them.

### Problem 1

**While we have learned a great deal about the psychological functioning of the young-old (those between 60 and 75 years of age), there is limited information available on the functioning of the oldest-old (those aged 75 and older).**

While there has been a great deal of research on the psychological factors involved in everyday functioning of older adults, this research has been limited for the most part to the life-span below the age of 80. Even though the largest proportional growth in our population consists of adults over the age of 80 years, we have devoted little research effort to this portion of the population.

◆ **WHAT WE KNOW.** Most research on the basic psychological processes necessary to function effectively have differentiated young adults (20 year

olds, for example) from old adults (60 year olds, for example). With young-old adults (ages 60-75), scientific studies have shown that there are age-related changes in learning, memory, and problem solving. Research on other psychological factors, however, such as personality or knowledge-based cognition (e.g., vocabulary), often show little change with aging. The small body of research on the oldest-old suggests the amount of cognitive decline after age 80 in normal older adults has been underestimated because the very old have not typically been included in studies, or they have been included in such small numbers that their contributions to the age effects have been difficult to detect. Because of the reduced social network of the oldest-old, it is likely that there are important changes in the social functioning of this age group.

◆ **WHAT WE NEED TO KNOW.** Basic research is critically needed on changes that occur in mental abilities during late adulthood with specific comparisons between young-old and old-old persons. These abilities include learning, attention, perception, memory, and problem-solving which can be assessed with behavioral methods as well as with biologically based psychophysiological techniques. If we have a better understanding of differences between the young-old and the old-old, we can begin to determine how to optimize functioning in late life, building on the skills and abilities that are least changed with very advanced age. How different are the oldest-old from young-old and how effectively do they function on familiar, everyday tasks compared to performance in new situations? There must be systematic study of how interpersonal social relations and personality differ between the young-old and the oldest-old. We also need to understand better the relative influences of environment and genetic factors in shaping the changes associated with aging. We also need to understand why some of the oldest-old adapt successfully to their environment despite substantial psychological and social change and why some do not. Furthermore, once the patterns of psychological change and continuity in the oldest-old are determined, we need to investigate whether this pattern will be replicated with younger groups of adults as they age and become the oldest-old in the 21st century.

◆ **A final area of concern with respect to psychological functioning in the oldest-old is the need for research to develop psychophysiological methods for the study of psychological processes in this group.** Highly

sophisticated, non-invasive imaging techniques are now available that can be used effectively to relate brain structure and physiology to behavioral outcomes and pathologies in cognition and to other psychological processes. Precise measurement of many psychological processes is possible using psychophysiological methods. The potential to relate the efficiency of these functions to specific brain structures may very well represent the new frontier in psychological aging research, particularly with respect to discriminating pathology from normal function. Identification of neural mechanisms underlying learning and memory will also provide insights into the causes of cognitive decline in late life. The use of animal models of behavioral and psychophysiological change is important to complement studies with humans, since many species age more rapidly than humans enabling the study of aging processes over several generations in a relatively short period of time.

### Problem 2

**Effective psychological interventions need to be developed that can promote, maintain, and even enhance the functioning of the oldest-old.** Because effective psychological functioning is a determinant of the ability of the oldest-old adult to effectively deal with everyday life, interventions that enhance the ability of the oldest-old to function effectively, productively, and independently in their everyday environment are needed.

- ◆ **WHAT WE KNOW. There are many potential techniques for supporting psychological function in the oldest-old that have been used with younger adults.** Environmental design can promote independence through careful attention to supportive devices and environmental arrangements that compensate for declining perceptual, cognitive, and behavioral processes. A more active technique involves actually training older adults to perform better in cognitive tasks. It is well-documented that cognitive training for general abilities can be effective for young-old adults, but little is known about the modifiability of intellectual function in the very old.
- ◆ **WHAT WE NEED TO KNOW. Interventions to support and even improve psychological functioning in the oldest-old have not received a great deal of attention.** Some promising work suggests that well-learned and practiced behaviors may be more resistant to decline than less expert behaviors, explaining how very old adults may function quite well as long as they are relying on highly practiced and familiar behaviors. There is also some evidence that because the retention of knowledge may not show the same age-related decline as other processes, the very old have an aggregate of knowledge and experience from which to draw that might best be characterized as wisdom. More understanding of how this rich knowledge store may compensate for declining processes is needed, in addition to how it can be tapped to benefit society.

There is also some evidence that information can be structured in a way that is easy for the very old to understand and process, and there is evidence that various kinds of environmental supports for declining psychological functioning can be effective. Little, however, has been done with respect to translating this knowledge into everyday applications for older adults, an area of research that needs more emphasis. Work in this area should focus on supports to prevent accidents and improve functioning in the daily environment.

The use of technology may promote and maintain function, much as eyeglasses are a simple prosthetic that improve vision. Inexpensive, programmable devices can be used as reminders for medication-taking, appointment-keeping, and other tasks in the daily routine. There is increasing interest in training older adults to use computer technology to perform basic and necessary activities, such as banking, grocery shopping, filling out health-care forms, and bill paying from the home. Electronic mail technology has untapped potential to serve as an inexpensive social support network for isolated older adults and to provide cognitive stimulation for older adults with similar interests across the country.

### Problem 3

**The oldest-old have serious problems maintaining independence and functional capability because of their reduced mobility and ability to drive.** A serious consequence of declining perceptual and cognitive function with age is increasing limitations on mobility. Older adults typically characterize driving as the primary source of mobility, so maintenance of driving becomes the primary concern in maintaining independent functioning. As with society in general, finding alternatives for the personal vehicle for transportation is an important issue.

- ◆ **WHAT WE KNOW. Frequently, older adults voluntarily restrict their driving due to self-perceptions of declining abilities.** Given the importance of driving in maintaining independence and facilitating social support in older adults, it is essential that tests be developed that are age-fair and permit the restriction of licensing on the basis of high predictability of accidents rather than age alone. Some research suggests that restrictions in the “useful field of view” (a measure of psychological visual attention) are highly predictive of accidents in all age groups. Moreover, it appears that people can be trained to improve their useful field of view, which holds great promise for training at risk drivers to be more functional on the road.
- ◆ **WHAT WE NEED TO KNOW. Effective, realistic, and cost-effective driving simulators for older adults must be developed. Currently, researchers of driving behavior often must measure driving ability by simply looking at accident rates.** The lack of an appropriate measure of driving ability among older drivers greatly

impedes our understanding of the effects of aging processes on driving behavior. Psychosocial models for how older adults restrict and monitor their own driving should be developed. The relationship between mental impairment and driving behavior (which has not been firmly established) must be better understood, and the role of families in supporting and restricting driving should be established. We also need to develop methods for increasing the use of seatbelts in this age group. Finally, more work needs to be done on improving the ability of older adults to read maps, find their way, and use materials that present information about public forms of transportation. It is important to know the conditions under which older adults will use public transportation, to develop training programs that enhance usage and comprehension of information about public transportation, and to develop better transportation signage for the needs of older adults.



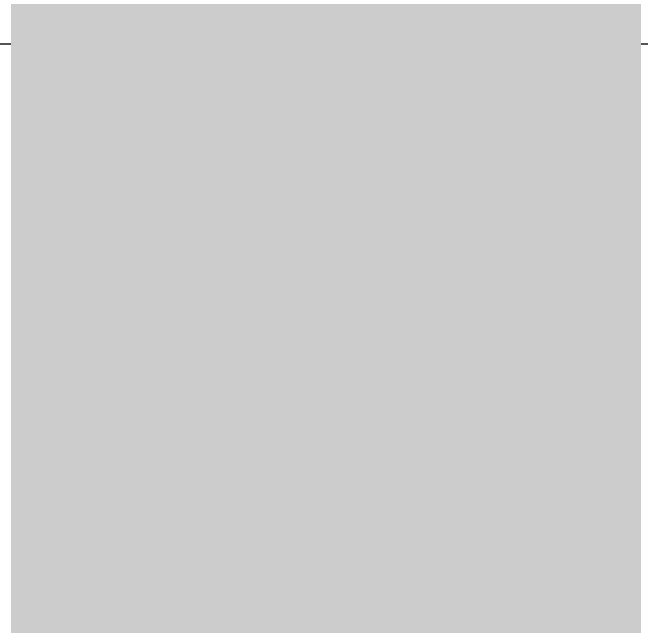
***Basic research is critically needed on changes that occur in mental abilities during late adulthood with specific comparisons between young-old and old-old persons.***

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Photos by Linda Bartlett

***One in four of the oldest-old is in a nursing home. Of the remaining 75% who are not institutionalized, 45% need assistance in the performance of everyday activities. An estimate of 20 to 25% of the oldest-old suffer from Alzheimer's Disease.***

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Linda Bartlett

***Psychologists are well positioned to address the issue of work and aging and to develop ways to maximize productivity and maintain work behaviors well into old age.***

**THE VITALITY FOR LIFE COMMITTEE**

***Improved workplace design and environmental interventions that enhance older workers' productivity and provide support for performance need to be identified and implemented.***

**VITALITY FOR LIFE COMMITTEE**

# CHAPTER 3

## Priority 3

**We must begin to understand how to maximize and maintain productivity into late adulthood. This will allow us to tap the wealth of older people's experience and expertise.**

As our work force ages, we must begin to understand how to use older adults as an important human resource in order to maintain the vitality and productivity of our work force. Earlier this century, retirement lasted a few years prior to death. Today, it may represent as much as a third of one's life. It is clear that changing demographics will profoundly influence decisions to continue working. Indeed, lower birth rates in the latter part of this century may force baby boomers to remain in the work force long after they had expected to retire, due to a limited number of younger workers to support retirees. Given demographic projections, it is imperative that we capitalize on the resources of older workers. Not only would it be difficult for this country to afford to have one third of its adult population out of the work place, it is also a waste of human capital. Despite declines in some functions and in health, middle-aged and older adults frequently perform at high levels in a wide variety of work settings. Psychologists are just beginning to understand how older adults compensate in the work place for cognitive, physical, and health-related decline, and continue to perform effectively. Psychologists are well positioned to address the issue of work and aging and to develop ways to maximize productivity and maintain work behaviors well into old age.

### Problem 1

**Older adults' sensory and cognitive capabilities decline with age, and we do not understand how these changes affect performance in the work place.** There are compelling data that indicate that with age, both sensory and cognitive functions change. Vision and hearing decline, and we are slower to respond to and process information. At the same time, the literature indicates that our knowledge base not only remains intact with advanced age, it actually continues to grow. Thus, although speed of processing new information may decline in the workplace, old knowledge is retained and new knowledge is added to the system. It is essential that we develop an understanding of how declines in processing speed paired with increases in knowledge affect work in late adulthood.

- ◆ **WHAT WE KNOW.** Despite age-related declines in sensory and cognitive function, older adults perform as well as young adults in their work environment. It

is well-documented that little relationship exists between age and performance in the workplace in most professions. At the same time, it is clear that some aspects of work behavior do decline with age. For example, aged architects and engineers take longer to perform spatial transformations than younger architects and engineers, despite the fact that such transformations are a daily aspect of their work behavior. Aged managers show more decline on many tasks but perform at least as efficiently as young managers in an emergency. Older workers take longer to acquire word-processing skills than young adults but do reach a high level of performance. Despite declines in many cognitive behaviors, it does appear that expert, highly practiced behaviors may be resistant to normal age-related decline. Despite this evidence, older workers are still less likely to be selected for training programs, and many employers believe that there is little return on their investment in such efforts.

- ◆ **WHAT WE NEED TO KNOW.** We need to understand the strategies that highly successful older workers use to support their work behaviors despite declining cognitive processes. There are a variety of compensatory strategies that can be used to maintain work performance, and it is also possible that the wealth of knowledge that older adults bring to the workplace offsets the declines in speed of information processing. This issue needs investigation. We also need to understand the optimal conditions for older adults to acquire new job skills and training. Computer software and hardware that is congruent with both the sensory and cognitive capabilities of elderly workers must be designed. Improved workplace design and environmental interventions that enhance older workers' productivity and provide support for performance need to be identified and implemented. Finally, factors that assist older workers in maintaining job-related skills need to be identified.

### Problem 2

**Through research we can identify reasons why some older people keep working while others decide to retire.** How long people remain in the work force depends on a complex set of issues, including meanings and values derived from work, financial considerations, health, non-work options, and role expectations. The increasing retiree-worker ratios will require rethinking of when, and why, people retire. The near

absence of mandatory retirement ages also will force revisions in people's expectations of work in later life.

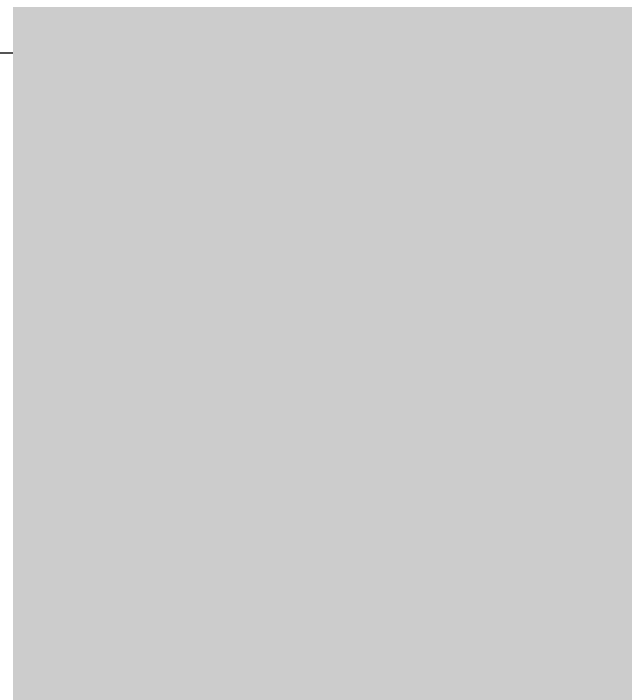
- ◆ **WHAT WE KNOW. Both retired and working older adults are satisfied with their situations.** Often, older workers are more satisfied with their jobs than are younger workers. Considerable research has also documented the myriad of roles and satisfactions that people derive from work. We know that the availability of sufficient financial assets is a key predictor of voluntary early retirement, and that health is a key predictor of involuntary retirement. Most retirees are satisfied with their situations, and often, highly engaged workers become highly valued volunteers upon retirement. Volunteerism is an increasing trend in older adults.
- ◆ **WHAT WE NEED TO KNOW. We know very little about what contributes to people's decisions not to retire, or to continue working into late adulthood, particularly when finances do not play a significant role.** Ethnic and gender differences in work attitudes and behaviors are of particular interest in these decisions. New roles for retired workers need to be developed that capitalize on their life experience. Little is understood about the effects of decisions to retire early on the individual or the society (in terms of lost expertise). Models for part-time work or for consulting for older adults must be developed and their effects investigated. The contributions to society that older adults make as volunteers must be investigated as should the role of volunteerism in enhancing the quality of life for the older adult.

### Problem 3

**The interaction of work roles and family roles shift with age in ways that we do not yet understand.** People's work lives and family lives are not independent. Indeed, considerable energy is expended in trying to find balance between the two. Despite the universality of the search for balance, we know very little about how older workers achieve it, whether the balance of energy expended between work and home shifts with age, and how this relates to productivity and job satisfaction.

- ◆ **WHAT WE KNOW. Older workers are reliable.** We know that older workers are among the most reliable of workers and that they report higher job satisfaction than younger adults, although the relationship of this to family roles is unknown. We also know that older workers are frequently placed in the position of caring for a very aged family member at home. It is firmly established that some aspects of dependent care are extremely stressful, and that workers' productivity levels suffer as a result. Properly designed intervention programs and examination of role obligations can serve to lower stress, but more attention needs to be paid to such programs with respect to older workers.

- ◆ **WHAT WE NEED TO KNOW. The impact of family changes and responsibilities on the older worker need investigation.** The increasingly common scenario of women remaining in the work force after a spouse retires has received little attention. Also, the effect of children leaving home on the interaction of work and family roles is unknown. The impact on worker productivity of older workers caring for very old parents must be identified.



David Hathcox

***We know very little about what contributes to people's decisions not to retire, or to continue working into late adulthood, particularly when finances do not play a significant role.***

VITALITY FOR LIFE COMMITTEE

# CHAPTER 4

## Priority 4

**We must develop better techniques for assessing mental health and appropriately treating mental disorders in older adults. This will provide older adults a better chance to achieve vitality throughout their lives.**

Mental stress and mental disorders take a significant toll on the health and productive functioning of older adults. An estimated 22% of older adults have a mental disorder, with highest rates being found among older adults in institutional settings, such as nursing homes (typically over 50%). Improved assessment and treatment of psychopathology among older persons could have a significant impact on the quality of life for older persons and on the economic costs associated with care of older adults with mental disorders. Nearly a quarter of hospital costs for older adults are due to treatment of mental health problems. There are many challenges in the treatment of mental disorders of the aged and psychologists can contribute across the broad range of these problems through research on effective assessments and treatment approaches. Equally important, we need to understand the large individual differences among older adults in responding to the stresses and challenges of later life. Why do many older people who experience the risk factors for psychopathology not develop subsequent problems? What is the life course of mental disorders, how does a preexisting mental disorder change with advanced age?

### Problem 1

**Although longevity has increased, the quality of life in later years can be characterized by multiple mental health challenges and stresses.** It is important to establish mental health promotion across the life course for sustained vitality and productivity in late adulthood. The stresses of later life include changing physical and mental abilities, changing social roles, changing family roles, and changing economic resources. The maintenance of mental health requires active coping by older adults.

◆ **WHAT WE KNOW.** **The majority of older adults do not have mental disorders.** Nevertheless, individual adaptation in later life requires individual initiative in the self-maintenance of mental, physical, and social functioning. In addition to individual efforts, social resources (e.g., family members and friends) can act as buffers and moderators of the stresses of later life. Equally important, there are ethnic and gender differences in coping approaches and coping effectiveness. In short, there is no

single way to effectively respond to the normal stresses of later life.

◆ **WHAT WE NEED TO KNOW.** **Although the descriptive literature on effective responses to later life stress has increased during the last decade, there has been relatively little investigation of the effects of organized interventions to support such effective responses.** For example, we need to understand the elements of effective coping that can be applied to programmatic interventions for a number of normal, developmental issues of later life: working through life-transition stresses (e.g., retirement, widowhood, etc.); coping with developmental crises; memory training; attacking the loneliness of later life; decision-making skills; and developing new skills. In addition, we need to understand the influence of adaptation across the life course: what is the impact of mid-life responses to stress on adaptation in later life? What are the unique challenges to mental health among the oldest-old (80+), the fastest growing portion of the older age groups? How does the interaction of the physical, mental, social, and economic determinants of positive mental health change in later adulthood, particularly among the oldest old?

### Problem 2

**Alzheimer's disease and other forms of dementia continue to be a critical neurobiological disorder of aging.** Although dementia is caused by progressive brain disease, the manifestations and consequences of dementia are largely cognitive, behavioral, emotional, and social. About three to four million Americans are affected by permanent, debilitating, and often progressive cognitive and behavioral losses, with 48% of the 85+ age group experiencing this problem. It is expected that the prevalence of this problem will triple within 50 years. Dementia has both emotional and economic costs. The long-term care required by dementia patients is highly stressful for their primary caregivers, who are most frequently family members. Economically, the direct costs for caring for dementia patients have been estimated to exceed \$38 billion per year.

◆ **WHAT WE KNOW.** **The progression of cognitive dysfunction associated with Alzheimer's disease has been well-documented, and the behavioral and emotional effects of Alzheimer's are beginning to be better described.** Through testing techniques developed by neuropsychologists and psychophysicists, as well as through neuroradiological techniques, we can

effectively diagnose different types of dementia, with an improved understanding of the basic mechanisms of cognitive and behavioral decline in these disorders. A significant number of older adults develop cognitive dysfunction that masquerades or is misdiagnosed as dementia (so-called pseudodementia) as a result of problems of over medication, depression, anxiety, or other potentially treatable causes. In such cases of reversible dementia, the older person's rehabilitation potential can be assessed. Some treatment techniques, such as behavior training, can lessen the behavioral, social, and emotional impact of dementia on the individual.

- ◆ **WHAT WE NEED TO KNOW. It is urgent that better strategies be developed to differentiate various forms of dementia, early stages of dementia, and to differentiate dementia from depression.** The goal is to develop an effective and efficient set of assessment strategies and improve diagnostic accuracy. To accomplish this, studies need to be conducted that document relationships among non-invasive psychophysiological, neuropsychological, and behavioral indicators to determine how these relate to one another. Similarly, research on the behavioral psychopharmacology of medications commonly prescribed for older adults can help develop safe and effective medication treatment while avoiding the unwanted side effects (e.g., confusion and disorientation) that are common among older adults. In addition, basic research on the neuropsychological underpinnings of dementia should continue.

Interventions for dementia are needed on a number of fronts, including therapeutic interventions to assist the recently diagnosed individual in early stages, who may be in great distress, because most research has focused on the family. Appropriate support and interventions for both the individual and the family also must be developed for later stages of the disease. In particular, the non-cognitive mental health aspects of dementia have been understudied, both in terms of basic descriptive research and intervention. Also, little is known about appropriate support interventions for members of different minority ethnic groups who often use established mental health services less frequently than do members of other groups. Different traditions and different understandings regarding dementia may require different intervention techniques to be effective.

### Problem 3

**Depression is one of the most common disorders in older adults.** Depression is a clinical syndrome that affects older adults in a variety of ways. Nearly 5 million individuals age 65 and over suffer from serious and persistent symptoms of depression, and over 1 million suffer from major depression. In institutions (e.g., nursing homes), a significant number of residents have major depression. Most of the treatment for older adults' depression occurs in the context of a primary care medical practice, with only a small minority of depressed

older adults being treated by a mental health practitioner. Thus, depression among older adults often goes undetected and untreated, seriously eroding the quality of life and productivity of older adults.

- ◆ **WHAT WE KNOW. Well-accepted, standardized methods for evaluating depressive symptoms and disorders in older adults have been developed.** In addition, effective treatment approaches for depression have been developed, including both pharmaceutical and psychotherapeutic approaches.
- ◆ **WHAT WE NEED TO KNOW. The relationship between susceptibility to depression and normal, age-related changes in brain structure and chemistry is poorly understood.** Moreover, the possibility exists that depression in older adults is a clinically distinct syndrome from depression in young adults, with somewhat differing causes, courses, and symptoms. This is an area that needs urgent investigation, since it may lead to more effective treatment approaches and an improvement in the diagnosis and identification of older adults who are most likely to benefit from treatment.

Research is needed to identify the optimal biological and psychological components of therapy for diverse groups of depressed older adults (e.g., those with late-onset depression versus life-long depressive disorder). In addition, adaptations of therapeutic approaches for older adults with various combinations of cognitive, communication, and depressive disorders should be explored. Similarly, clinical trials and observational studies are needed to identify optimal components of therapy for the very old, older adults from minority or underserved communities, institutionalized elderly, and older adults with a combination of physical illness and depression.

Finally, effective training and educational approaches should be explored to improve the ability of primary care physicians to more accurately diagnose and treat depressive symptoms and depressive disorders among older adults.

### Problem 4

**Older adults commit suicide at disproportionate rates; although they represent 12.4% of the population, they account for 21% of suicides.** Although the right to choose rational suicide in later life is legitimately debated as a legal and bioethical issue, the majority of suicides completed by older adults occur among those with an identifiable mental disorder that constrains rational, informed, decision-making.

- ◆ **WHAT WE KNOW. There are substantial variations in the rate of suicide by different gender, age, and ethnic groups, with white males over 80 having the highest rate of completed suicide.** Suicide among older adults can be precipitated for many reasons, including reaction to losses of later life, a reaction to chronic or terminal

physical illness, or a consequence of an accompanying depression or other mental illness. Primary care physicians are often contacted by older adults prior to suicide (e.g., over 70% of elderly male victims have seen a primary care physician within a month of the suicide); however, primary care physicians often do not recognize the potential risk of suicide among their older patients. The psychological autopsy has become a respected research method to help in understanding the individual suicide.

- ◆ **WHAT WE NEED TO KNOW. We need to learn how to effectively recognize the differences between those suicides that represent an informed and rational decision by the older adult and those that are the result of an underlying mental disorder.** Standardized research protocols for the study of suicide must be developed and databases pooled in order to develop the large-scale studies necessary to understand this problem. By determining profiles of who is at risk, effective long-term prevention strategies can be developed. For example, we need to identify effective methods of training primary care givers, family members, and others in frequent contact with older adults to recognize early risk signs of suicide potential among older adults and to take appropriate action. Expanded research will also permit an understanding of ethnic differences in suicide rates, as well as strategies for effective suicide prevention in different ethnic groups.

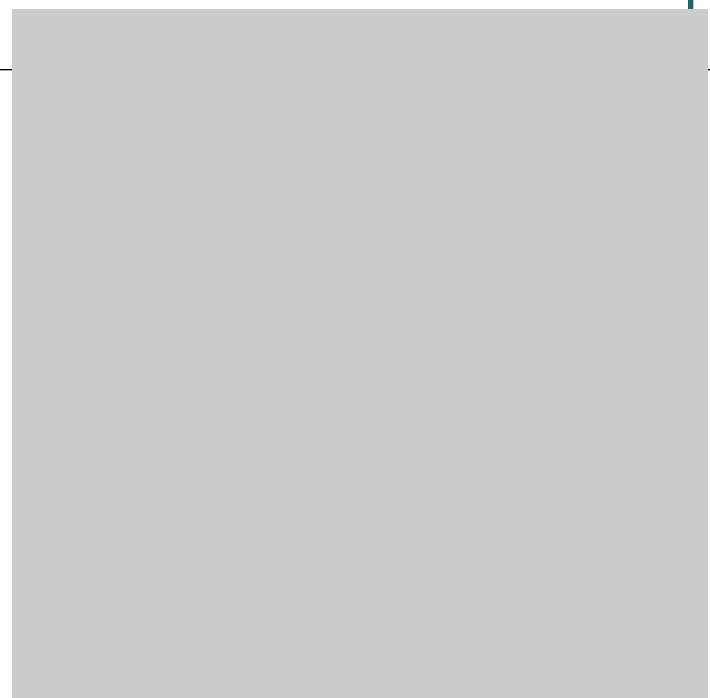
**Problem 5**  
**Anxiety disorders are at least as prevalent among older adults as depression, yet they have received less scientific and clinical attention.**

- ◆ **WHAT WE KNOW. Anxiety disorders constrain or severely impair the social functioning of affected older adults.** Estimates suggest that 5% of older adults have an anxiety disorder. Effective psychological interventions for anxiety disorders among young adults have been developed, but their efficacy with older adults has not been fully established.
- ◆ **WHAT WE NEED TO KNOW. It is often difficult to differentiate anxiety disorders from depression among older adults; sensitive assessment techniques need to be developed to accomplish this.** Similarly, assessment techniques should be developed to diagnose anxiety disorders that are presented as physical symptoms or cognitive decline, since these types of problems may be viewed as more socially acceptable mechanisms for expressing emotional distress. Little is known about what combination of pharmacological therapies and psychotherapies are most effective for treating anxiety disorders in older adults. Adaptations of successful therapies for younger adults need to be evaluated for the range of anxiety problems experienced by older adults. We also need to document the psychophysiological

reflections of brain and heart function, as well as the biochemical mechanisms that accompany the experience of heightened anxiety among normal older adults.

**Problem 6**  
**More than half of older adults who are treated for physical disorders in hospitals, clinics, and nursing homes also have at least one mental health problem that is typically not effectively recognized and treated in such settings.**

- ◆ **WHAT WE KNOW. The most common problems among older outpatients are depression (at least 25%), anxiety (at least 10%), sleep disorders (as much as 50%), and alcohol-related problems (at least 10%).** Large numbers of nursing home residents have both mental and physical illness (e.g., from 25-50% are significantly depressed, along with their physical illness). If left untreated, these mental disorders may affect the underlying physical illness, cause substantial mental distress, and increase the costs of care (by reducing the older person's self-care and thus resulting in the need for more intensive staff assistance).



Linda Bartlett

*The time has come to declare behavioral research on aging a major national priority. The country cannot afford to wait until the next century when the surge in the older population will demand that action occur.*

VITALITY FOR LIFE COMMITTEE

- ◆ **WHAT WE NEED TO KNOW. The assessment and treatment of this particularly needy population presents a challenge that has been largely unmet.** Clinical and epidemiological studies to understand the relationship between mental disorder and chronic physical illness are urgently needed, as are assessment techniques that can be used in hospital, nursing home, and home settings. Models for the combined use of medical and psychological services need to be developed, along with an understanding of barriers to effective service use. Psychological therapies need to be developed and evaluated for use in nursing homes and home settings to effectively serve older adults who have a combination of chronic physical illness and mental illness. The optimal combination of behavioral, psychosocial, and biological interventions to effectively serve subcategories of patients with specific combinations of physical and mental disorders needs to be determined.

#### Problem 7

**Other mental disorders of aging, while less prevalent, are equally damaging to productive aging.**

- ◆ **WHAT WE KNOW. Other disorders are known to adversely influence the economic, social, and functional productivity of older adults.** A partial listing of these problems includes: sleep disorders; homelessness; personality disorders; alcohol and substance abuse; chronic mental illness; and polypharmacy. For example, as many as half of the elderly suffer from chronic sleep disturbance, a condition associated with problematic use of sedative medications and increased illness and death. Similarly, homelessness

is another challenge for older adults: a disproportionate number of the homeless are over age 50.

- ◆ **WHAT WE NEED TO KNOW. The effective assessment and treatment of these particularly needy patient populations presents a special challenge that has, thus far, been unmet.** Basic and applied research on each problem area is needed. In addition, the relationship between and among these disorders need to be better understood, in order to design effective treatments. Community-based and institutional descriptive, assessment, and treatment studies are needed. Models for the optimal combination of psychological and medical services for these special populations need to be developed and evaluated.

## Closing Statement

The time has come to declare behavioral research on aging a major national priority. The country cannot afford to wait until the next century when the surge in the older population will demand that action occur. *We must act decisively now.* It is clear that psychologists can offer a great deal to increase human productivity and vitality in late adulthood. Psychologists' understanding of issues such as health, work, the oldest-old, and mental disorders strategically places them at the forefront of scientific investigations of aging. It is only by investing in behavioral research on aging that we will we advance our understanding of many aspects of aging and find solutions to behavioral problems faced by older adults in their everyday lives. Investing in the psychology of aging is investing in vitality for life.

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