

Disability, Aging and Older Workers

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DEMOGRAPHICS OF AGING

- In July 2003, it was estimated that 36 million people were aged 65+ in US (~12% of total US population)
- Among this group, 18 million persons were aged 65 to 74, they are often referred to as the young-old cohort
- With 13 million aged 74 to 84 (old cohort)
- And nearly 5 million aged 85 or older (oldest-old cohort)
- By 2030 it is forecast that persons aged 65+ will double to more than 70 million (20% – 25% of total US pop)

FUTURE SOCIETAL IMPLICATIONS OF AGING IN US

- The enormous growth in the senior population in US represents numerous profound implications
- Exploding health care costs as a result of the much larger footprint of elderly persons is inevitable
- Tax-supported expenditures that target elderly will dramatically increase (Medicare, Social Security, Medicaid)
- Formal and Informal caregiving needs will increase
- Other economic issues such as increasing numbers of older workers as a result of loss / reduction of retirement and pension benefits is likely

DEMOGRAPHICS OF AGING

- The US senior population grew rapidly throughout the 20th century
- In 1900 there were approximately 3 million persons 65+ (4% of population), in 2003 there were 36 million in this age group(12% of population), a 10 fold increase

- In fact, the growth of the older US population has outpaced that of the total US population over the past century in every age group, and will continue to do so at an accelerated pace over the next 30 - 50 years

DEMOGRAPHICS OF AGING

- The older population in the US is on the verge of a “tsunami”
- By 2030 it is forecast that persons aged 65+ will double to more than 70 million (20% – 25% of total US pop)
- This is a direct result of the unique demographic reality of Baby Boomers in the US (persons born between 1946 & 1964)
- Thus, the nature of aging, the face of aging and the social construction of aging for this birth cohort will be far different that anything we’ve experienced in history

DEMOGRAPHICS OF AGING

- The most profound growth among seniors over the past 100 years has been the numbers of oldest-old (persons 85 and older)
- In 1900 the oldest-old comprised only .1% of the total US population
- By 2000, this had increased to 4.1% of the US, **a 34 fold increase from 1900!**

DEMOGRAPHICS OF AGING

- The number of **centenarians** (those persons who are 100 and older has increased dramatically as well
- Birth records and reliable vital statistics on the very oldest persons in US is often sketchy, but we estimate there are over 50,000 centenarians currently alive
- 90% of these centenarians are between 100 - 104 years of age, and is estimated that 80% are female
- Centenarians are fascinating group to study in terms of factors related to health, morbidity and mortality

THEORIES OF AGING: BIOLOGICAL

- Program Theory holds that cells replicate a specific number of times and then die. This happens again, and again in lab experiments.
- Error Theory suggests the structure of DNA is altered as people age, resulting in transcription and translation malfunction, and manifests as aging / illness
- Free Radical Theory: lipids in cell membranes are exposed to radiation or free radicals, Cell membrane ruptures and cell dies
- Mutating Auto-Immune Theory: cells have normal functions - secrete normal proteins, as cells age the mutate and secretions are viewed as foreign by body soliciting an immune response, thus shutting down the cell, and ultimately the organ / system

THEORIES OF AGING: SOCIAL

- Disengagement Theory: inevitable, universal withdrawal from roles and activities characteristic of middle adulthood, willingly make way for younger,

more productive members of society—go quietly to their rocking chairs, and then to their graves (Cumming & Henry)

- Age stratification Theory: The acknowledgement that issues of stratification in society (a person's location and position in society based on gender, racial/ethnic identity, relation to the means of production, and access to resources) are important throughout the life course. Likewise, social and historical aspects play a large role in shaping and influencing a person's life (Riley, Foner & Johnson)
- Political Economy of Aging (very Marxist perspective): Economics and a person's position to the distribution of societal resources and the means of production in society-- particularly involving minority inequality is due primarily as a function of social forces, negative stereotypes and **public policy**, all of which combine to marginalize and restrict minority (and specifically elderly minority) access to societal resources (Estes)

THEORIES OF AGING: SOCIAL

- Double or Multiple Jeopardy: double jeopardy is the notion that the interlocking nature of, and oppression due to aging combined with minority racial membership puts minority elders at further risk of economic marginalization; multiple refers to the additional issues that a minority female elderly, (disabled, etc) may face (Burton and Bengston)
- Age as leveler theory: as persons age and face increasing physical decline, racial differences become less apparent between elder persons.
- Continuity theory: Robert Atchley suggests that persons who are best able to adapt and modify their lives to changes in life and role transitions that are part of the aging process demonstrate higher degree of continuity throughout the later years. This suggests that those persons that do not deal with or adapt well to the uncertainties and multiple challenges of later life experience discontinuity, and is viewed in a negative and pathological light.

LONGEVITY & LIFE EXPECTANCY

- People in the US are living longer and, for many, healthier lives than ever before
- Average life expectancy has increased from 47.3 for those born in 1900 to 77.1 for persons born in 2000
- A white male born in 2000 has a life expectancy of 74.9 years, a white female 80.1
- Differences in life expectancy continue to exist between racial / ethnic groups in US society today

LONGEVITY & LIFE EXPECTANCY

- Women outlive men an average of 5.4 years based on 2000 US Census data
- In 2000, there were 81 males to every 100 females 55+
- This skewed sex ratio becomes even more asymmetrical with advancing age - - **at 85+ the ratio was 49 males to 100 females!**
- This clearly demonstrates unique distinctions between males & females with

respect to the experience and reality of aging

LONGEVITY & LIFE EXPECTANCY

- Because men are generally older than their spouses at time of marriage, and the fact that women have higher life expectancy, high proportions of elderly woman are widows and live alone
- This influences numerous factors for aging females, particularly the higher tendency for institutionalization, experiencing reduced income, and living in poverty.
- This also raises very important policy and social support questions that will come into sharp focus in the coming years

MORTALITY & AGING

- Married people have lower mortality than unmarried people at all ages, and the survival advantage of marriage is largest for men
- Among persons age 65 – 74, death rates per 100,000 for never married people was 4,030, as compared to 2,351 for ever-married persons
- For persons who had ever married, death rates were lowest for those currently married vs. those who were divorced or widowed
- The main argument is that marriage serves as a preventative mechanism to a host of negative risks factors: such as less likely to engage in health damaging behaviors, provision of care and support when needed, larger social network from which to utilize, shared resources and greater quality of life

MORTALITY & AGING

- The top 3 causes of death in the US among older persons in 2000 included:
- Heart Disease (33% of deaths)
- Malignant Neoplasms (22%)
- Cerebrovascular Diseases (8%)
- Among women, death from Lung Cancer has become the leading cause of mortality, surpassing even Breast Cancer

MORTALITY & AGING

- Suicide, while a small fraction of older mortality, is more common among in elderly persons than any other age group
- In fact, suicide rates among white males 85+ was over 5 times the national rate in 2000 (59 per 100,000, as compared to 10.9 per 100,000)
- Suicide is most common among older white males
- Depression is considered to be a key factor in explaining suicide and attempted suicide, yet remains an under-diagnosed and under-treated condition among older persons

AGING & HEALTH

- **Primary aging** refers to the normal anatomical and physiological changes associated with the aging process
- Demonstrable decrease in functional cell mass in every organ begins to become pronounced by age 30

- It is suggested that a gradual and steady decline in cell and organ function is experienced, and that by age 75 physiological structures have lost ~50% of original functional capabilities
- The main concern with primary aging is diminishing “functional reserve potential” in the bodily organs, thus serious injury or disease is tolerated less well, and recovery time becomes longer and less satisfactory

AGING & HEALTH

- **Secondary aging** is defined as an accelerated process of aging that occurs from largely preventable or otherwise modifiable circumstances, as well as onset of chronic diseases
- Leading causes of secondary aging include cardiovascular and cerebrovascular dx, diabetes, smoking, poor nutrition, alcohol abuse, and lack of proper exercise / activity
- Preventative health care and behavior modification are obvious mechanisms to help curb secondary aging

CHRONIC ILLNESSES & IMPAIRMENTS

- Chronic illness and impairments are among the leading causes of disability in older persons
- This process can negatively impact quality of life, independent living and impose significant economic burden on individuals and families
- It is estimated that 80% of seniors 65+ have at least one chronic health condition, and 50% report two or more

CHRONIC ILLNESSES & IMPAIRMENTS

- Arthritis, encompassing over 100 specific diseases & conditions, is a leading cause of disability among older persons
- Arthritis is a chronic or degenerative joint inflammation condition that causes pain, stiffness, and ultimately damage to joint cartilage and surrounding structures
- While arthritis affects men & women at all ages, it is more common in the elderly, and is seen more often in women
- Damage to cartilage and surrounding areas can lead to joint weakness, instability and visible deformities that, depending on the location of joint involvement, can interfere with the most basic daily tasks.

CHRONIC ILLNESSES & IMPAIRMENTS

- Hypertension is also another significant chronic condition often experienced by elderly persons
- Aging is often accompanied by elevated systolic & diastolic blood pressure due to deteriorating cardiovascular system
- Activity limitations as a result of circulatory disease typically results in activity limitations
- Prevalence rates of hypertension in adults 18 – 44 is .5%; among persons 65 – 74 the rate increases to 11%; and in persons 75 or older it is 17%

- Often referred to as a silent killer, symptoms of hypertension are often not readily noticeable

CHRONIC ILLNESSES & IMPAIRMENTS

- Heart disease and stroke are also commonly seen chronic illnesses that have a profound impact on overall health and well being, morbidity and mortality of older adults
- It is estimated that 40% of persons 65+ will eventually die of some form of cardiac disease
- Some 24% of older males and 15% of older females currently have coronary heart disease
- In the year 2000 it was estimated that 9% of men and 8% of women suffered from a cerebrovascular incident consistent with stroke
- Older Blacks have a higher overall incidence of stroke than do their respective White or Hispanic peers

CHRONIC ILLNESSES & IMPAIRMENTS

- Diabetes is a chronic illness that represents significant potential for disruption of function and overall health
- It is a leading cause of renal (kidney) disease, as well as vascular disorders, neuropathy, and vision loss
- Prevalence rates of diabetes are higher for older persons (15% in males; 13% in females) than younger adults
- Older Hispanics (22%) and older non-Hispanic Blacks (23%) are at higher risk of diabetes

CHRONIC ILLNESSES & IMPAIRMENTS

- Thinning of bones is associated with menopause and aging in general; advanced form is referred to as osteoporosis.
- As bone material dissolves and is absorbed faster than new bone is made, bones become thinner.
- Bones also become less dense and more fragile and brittle due to a decrease in mineral content.
- This normal process of aging leads to significant risk for fracture from falls and other physical trauma
- Hip fractures are often devastating, and often used as a benchmark in predicting mortality in older persons.

CHRONIC ILLNESSES & IMPAIRMENTS

- As we age we experience changes in muscle mass: muscle fibers in both the upper and lower extremities begin to shrink
- At the same time, muscle tissue is replaced more slowly
- Changes in fibers and tissue result in muscle mass declining by about one percent a year from the age of 30
- This impairment, called sarcopenia is one of the major causes of disability in older persons

- Loss of muscle mass leads to a reduction in strength.
- Loss of strength in the upper extremities can cause difficulty handling objects, including gripping, fingering, pinching, pushing, pulling, pressing, turning, and lifting.

CHRONIC ILLNESSES & IMPAIRMENTS

- Sensory impairments, including vision and hearing loss, can decrease functional independence and be risk factors for falls, social isolation and depression
- While persons 65+ account for only 12% of the US population, they account for about 37% of all hearing impaired, and 30% of all visually impaired individuals
- Visual impairment (sight loss that is not correctable) is strongly associated with age
- The prevalence of vision loss and visual impairment including blindness is highest among the oldest-old

VISION LOSS & VISUAL IMPAIRMENT

- Decreased transmission of light through the ocular media
- Increased scatter of light throughout the cornea, lens, and retina
- Decreased pupil size
- Decreased Field of View (peripheral vision)

VISION LOSS & IMPAIRMENT

- Common Types of Visual Impairments:
- Loss of Central Field - ARMD, Diabetic Retinopathy, Stargardt's Disease
- Loss of Peripheral Field - Retinitis Pigmentosa, Advanced Glaucoma, Heminopsia
- Mixed Field Loss - ARMD, Brain Trauma, Diabetic Retinopathy

Visual Impairment in the US

- **Primarily an age-related problem**
- **3.4 million 20/50 or worse (40 yrs or older)**
- **1.1 million legally blind 20/200 or worse, <21°**

- **Prevalence by age:**
 - **0 - 54 .6% 20/50 or worse**
 - **55 - 84 10.1% 20/50 or worse**
 - **85+ 21.6% 20/50 or worse**

Employment & Vision Impairment

- Historically, people who are VI have found it difficult to obtain employment
- According to the AFB, approximately 46% of VI adults aged 18 - 69 are employed, along with 32% of legally blind adults in the same age group
- In addition, several recent studies have found that persons with vision impairment are more likely to be unemployed or under-employed than people with any other type of disability

Employment & Vision Impairment

- Certain barriers to employment are more prevalent among those who are blind or have low vision. They include:
 - Transportation issues (which may include O&M)
 - Administrative barriers
 - Lack of job readiness skills
 - Lack of access to print materials
 - Lack of access to, and/or skills with AT

AGING INTO DISABILITY

- With the increase in life expectancy, the amount of time the older person is likely to live with a disability is also going up.
- A concept in geriatrics that was pushed hard several years ago was the theory of **compression of morbidity**; that is, with good health care, better general nutrition, better exercise, and better health promotion activities, people would continue to age without disability and more people would live to advanced old age.
- In other words, we would compress morbidity (or illness) into the very end of life, with maybe a year or hopefully even less of sick time before people would die.
- Unfortunately, it doesn't appear to be happening at the present time. Recent data suggest that beyond a certain age, for many people living longer doesn't necessarily mean living better or actively.
- In fact, the longer we live, the greater the likelihood that we will spend an increasing percentage of our older years living dependently rather than independently.

AGING INTO DISABILITY

- A concept that is being pushed currently in gerontology and geriatrics is the difference between usual aging and successful aging.
- By usual aging, we mean that the typical, or average situation for an older person is to have one or more of the chronic diseases or impairments that I just mentioned. The difficulty occurs when we try to separate out what is statistically common or typical from what is physiologically normal.
- Successful aging is a term that is used to describe ideal physiologic, psychological and social aging outside the realm of disease, and it does appear that there are small numbers of people in our society who undergo this form of aging.
- Another related concept in gerontology is the so-called "rule of thirds"; that is, what we think of as aging is really a combination of three things -- normal age-related changes plus the effects of disease and the effects of age-related diseases.
- Persons who age into disability may have significantly different views in terms of seeking help, advocating for themselves or even acknowledging

AGING WITH DISABILITY

- Until recently, individuals with a disability seldom enjoyed the same life expectancy as their peers without disabilities.
- Secondary medical conditions such as respiratory illness, renal failure, accidents, infections, and depression, coupled with a general lack of adequate primary medical care, prevented most persons from experiencing their true life expectancy.
- Today, advances in medicine and rehabilitation have made the expectation of living to late life fairly reasonable for most persons, even those with a significant disability.
- In fact, aging with a disability has been described as one of the most important new developments in rehabilitation

AGING WITH DISABILITY

- The single most important finding is that "chronic disability" is not at all static over the life span.
- Many, if not most, persons who live 20+ years with a disability or who are 40 years of age or older encounter substantial new medical, functional, and psycho-social problems that were neither expected nor planned for at an earlier age.
- Many of these changes are well underway by middle age; some are even underway by age 30 or as soon as 10 years after one acquires a disability.
- While the exact causes of this "premature aging" are unknown, the following discussion shows that persons with disability do not age in a typical matter.
- Persons w/ disabling conditions often see options in terms of advocacy and within the service model, thus they're experience with disability is often counter to persons who age into disability

SOCIAL IMPLICATIONS & AGING

- Poverty rates among older persons have declined significantly in past 50 years
- In 1959 35% of persons 65+ lived below the poverty line, by 2003 this proportion had decreased to 10%
- However, older women, and particularly older women of color were more likely to live in poverty than their male peers
- Older white women living alone experienced poverty at 17%, and older Black and Hispanic women living alone experienced poverty rates as high as 41%

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