

***CHAPTER 3***  
***REVIEW OF***  
***PAST STUDIES***

## BIOLOGICAL STUDIES ON AGING

Olsho, L W. (1985) found that the ability to hear high frequency tones begins to decline after age 45 and becomes marked among people in seventies. By this time, about 75 percent aged have noticeable hearing problems, with hearing loss generally more severe in men than in women. People who live in less noisy environments show smaller hearing losses than people who live in noisy environment.

Harkins, D.B. (1971) found that smell also declines with age and upto 30 percent of people over age 80 have difficulty in identifying common substances by smell. In addition, taste buds decrease sharply with age, originally there are 250 taste buds on the tongue but by 65 years of age, the number drops to 100.

Takeka, S. and Matsuzawa, T (1985) reported decreased brain weight over the years and also increased space between brain and the skull and expansion of the ventricles. Using CT scans of hospital patients, they confirmed clear shrinkage of brain beginning after age forty in men and age fifty in women.

Eventt, A V. and Huang, C Y (1980) revealed that decline in the body's ability to respond to stress is primarily the result of aging in the autonomic nervous system. With age, many of the responses controlled by the autonomic nervous system slow or become weaker. This slowing may be the result of changes in the metabolism of neuro-transmitters.

Guigoz, Y. and Munro, H N (1985) found that dietary deficiencies in older adults are not usually the result of nutritional ignorance. Low income, lack of mobility, stress, loneliness, ill health all affect the purchase and consumption of food. Those with incomes below the poverty level cannot buy the right food. Also those who are worried, depressed, lonely, anxious or low in self esteem have little appetite. Compared with those who live with other people, other people who live alone have a less adequate and varied diet, eat fewer foods or skip the meals. In contrast, older people who retain social ties with spouse, family, friends are likely to maintain an adequate diet throughout life.

Eisdorfer, C and Wilkie, F (1977) studied effect of stress on aging. Their study proved that stress accelerates the aging process and has a detrimental effect on physical and mental health. The aging process affects the immune system, decreasing the ability to resist stress and making the person more vulnerable to the development of disease as a response to stress.

Campbell, A (1979) compared older people with younger people to estimate the degree of disruption caused by major life events, and found older people to produce consistently lower ratings. Older people also seem to worry less than younger people, report greater satisfaction and less feeling of stress. In contrast, young people are less worried about physical health than middle aged or elderly.

Spence, A.P (1989) found that with age, the pupil of the eye gets smaller. The decrease in size begins in young adulthood but its progress is slow. By the age of 70, the amount of light that reaches the receptors may be reduced by at least two-thirds, and thus aged need a good deal of light in order to see clearly as they once did.

Verrillo, R T. and Verrillo, V. (1985) found that glaucoma first appears among people past the age 40 but the greatest incidence is among older adults; 3 percent of the population past the age of 65 suffer from severe glaucoma and another 6 percent having related problems

Kline, D W. and Schieber, F.J. (1982) found that cataracts become increasingly common with age; 20 percent of people with cataracts are between the ages of 55 and 65. They also knew that people who develop them often have elevated level of sugar, hereditary factors, unhealthy eating habits, extensive exposure to high levels of ultraviolet radiation.

Corsa, J.F (1981) studied visual activity and age. And he found that activity seems to increase until the thirties and is stable until the mid-forties. After the age of 50, it declines steadily until, by the age of 85, activity has fallen to 20 percent of its earliest peak.

Whiteboure, S (1985) studied hypochondriasis in old age and found common functional disorder among older adults. It appears to peak between the years of 60 and 64 and it is prevalent among women than men. This disorder is response to accumulated stress, isolation, economic problems and marital dissatisfaction.

## PSYCHOLOGICAL STUDIES ON AGING

Freeman, F.R (1976) found in a study that about 5 percent of the population who have passed the age of 65 have a chronic brain dysfunction or dementia that interferes with cognitive functioning either moderately or severely. In another 10 percent there is mild cognitive impairment.

Bootzin, R.R and Jacocella, J. (1988) studied Parkinson's disease and found that it appears as early as the thirties, although it usually shows up when people are in their sixties. They also found that 40 to 60 percent of patients show mental impairment and many also become apathetic and socially withdrawn. This disorder is twice as common in men as in women. They attributed the reasons to genetic influences, viruses, toxins, encephalitis or distributed metabolism in the brain.

Salthouse, T.A and Somberg, B.L. (1982) found that even though they provided older individuals 50 hours practice over a 10 week period on a variety of perceptual motor laboratory tasks, age differences remained.

Schonfield, D.H (1981) studied whether age differences appear in selective attention depends on the situation. He found that when the task is simple, older adults do as good as young; they are somewhat slower but at least accurate. When additional and irrelevant information is added, speed of older adults drops sharply and age differences are clearly seen.

Ribot, T A. (1980) studied divided attention comparing young and old subjects. He found that when subjects are required to divide their attention between two tasks, older adults are as accurate as young when the task is simple. Then he provided two tasks at the same time and he found that performance of older adults deteriorated significantly

McGhie, A (1969) suggested that the problems older adults have with tasks that require attention switching from an impairment in short-term memory. The elderly person is unable to maintain in memory one set of information while responding to another set of information. He further suggested that switching attention is limited because of difficulties in retrieval. This retrieval is more difficult and takes longer for older adults to accomplish

Parasuraman, R. (1970) found that overall levels of performance in sustained attention or vigilance tasks appear to be reduced with age. He also found that older adults were less accurate in detecting the target stimulus than young adults.

Rabionowitz, J.C. (1986) hypothesized that due to reduced attentional resources older results might not form distinctive, contextually specific encodings of new information but rather would encode events in the same old way

Gribbin, K and Parham, I A (1980) noted that being interested in cultural and educational activities, being married and being affluent are all characteristics that are positively related with the maintenance of high levels of psychological competence energy and attitudinal flexibility in old age

Willis, S L (1988) had identified a number of structural variables that tend to effect the rate of cognitive decline He provided some positive factors that have been more related like high levels of education, high occupational status and income, intact marriage, exposure to stimulating environments, communication with spouse and children

Blazer, D G and Bachar, J R (1979) found that suicide remains more frequent in the elderly than other age group and is more significant after age of 65 Though suicide are carried out for different reasons, depression is among the most common. They also noted that suicidal rates are higher in urban than in rural areas; higher in unmarried as opposed to the married, increased in times of unemployment and economic depression

Foster, J C and Taylor, G A (1950) compared a group of hospital patients of 50 years and above 50 years of age. An age decline was significantly found which they attributed not merely to actual loss in ability but also lack of practice in certain kinds of activities, reduced interest and alertness.

Brown, C W and Ghiselli, E E (1949) found that operations involving simple arithmetic were maintained very well in forties. But when a compound process was required such as both subtraction and addition, decline in efficiency was noted. They further noted that as the complexity of a task increased, older persons are less accurate and less effective in correcting errors.

Kubo, Y (1964) tested elderly in the reproduction of word lists three to seven words in length, presented orally. He found that an age decline does not become especially marked until the late seventies in women and early eighties in men.

Gilber, J.G. (1954) matched two groups of younger and older people for vocabulary level. As an age sampling the older persons were on the whole probably superior to the younger group. He also concluded that those aged were intelligent and have better memories when they were young and retain these abilities more effectively as they grow older.

Desai, K G. and Naik, R.D (n d) in their study of problems of retired people in Greater Bombay list the psycho - social problems as that of (i) adjustment to family members who may increasingly resent their presence; (ii) they have to adjust to a life devoid of much activity, (iii) they have to adjust themselves to loss of spouse or loss of friends, and (iv) they are increasingly made aware of death and have to adjust to this unpleasant fact.

Saraswathi, T S. and Dutta, Ranjana (1988) are of view that problems of adjustment are associated with both contemporaneous factors and antecedent life conditions such as retirement, reduction in income, loss of spouse and deteriorating health. According to them past studies indicate that well adjusted subjects enjoyed good physical health, had positive self-concept, had more friends, participated in recreational activities and complained less of being lonely.

Several studies of paired - associate learning (e.g. Arenberg, 1965, Canestrari, 1963) and serial learning (e.g. Eisdorder, 1965, Wilkie, 1963) have found that older subjects are significantly inferior to younger subjects in speed of learning. The age deficit is attenuated when either presentation time or the time available for responding is increased. More specifically, various studies have indicated that a shorter anticipation interval (decreased association time) is responsible for lowered performance in elderly.

Lawrence (1966) found that old subjects showed inferior free recall of an unrelated word list to young subjects, but that age had no effect on subjective organization of recall. She argued that the subjective organization index might not adequately reflect organizational processes, since rigid adherence to an invariant order of output would produce a high subjective organizational score. In contrast Denney (1974) presented her subjects with free recall lists. The middle aged subjects recalled considerably less words than the elderly subjects, and also

showed much more categorial clustering. In fact, the elderly subjects showed no evidence of clustering

Rowe and Schnore (1971) found that concrete paired associates were better recalled than abstract paired associates by subjects of all ages, but that old subjects had the lowest level of overall performance. Post - experimental questioning indicated that old subjects were less likely to have used verbal or imaginal mediation than the middle - aged or young subjects

Heron and Craik (1964) matched young and old subjects for their digit span, presenting the digits in a foreign language. The young subjects were significantly better than the old subjects on a subsequent digit - span task in their native language, possibly because the organizational potential was greater with the more familiar material, and the young subjects were better able to exploit it

Lawrence (1967) found that young and old adults both recalled more words from lists of related than of unrelated words, but the major findings was an age by list type interaction, in which old subjects were at more of a disadvantage on the unrelated ones. She argues that previous learning and experience were more directly relevant to learning the related lists

Schonfield and Robertson (1966) found that recall performance declined consistently and significantly with age, but that there was no deterioration with

age in recognition performance. However, a 'ceiling' effect may have been operative on the recognition task, since for no age group did mean recognition performance fall below 80 percent.

## **SOCIOLOGICAL STUDIES ON AGING**

Watkins, S C , Menken, J A & Bongaartas, J (1987) observed that changes in family structure and in the duration of roles and relationships can largely be attributed to the joint effects of two demographic trends : (i) the dramatic decline in mortality during the century and (ii) decline in fertility - the number of children born per has decreased They also noted some other features of demographic revolution that have contributed to changes in the family life of older adults include variations in the timings of fertility, namely teenage child-bearing, delayed childbearing, childlessness, increased in single parenthood and divorces

Uhlenberg, P (1974) found that length of time women spend as widows is another family status affected by demographic transition. Today's aging women become widows at later ages With improvements in life expectancy, the fraction of women widowhood before 50 has markedly decline yet widowhood remains much higher at each age for women than for men

Streib, G and Beck, R W (1980) found that in later life, a much greater proportion of men than women are married, reflecting the custom for men to marry women younger than themselves, greater longevity of females than males and the higher remarriage rates for older men

Verbrugge, L.M. (1979) compared married and unmarried elderly and found compared to unmarried elderly, married elderly have higher levels of morale, life satisfaction, good physical and mental health, social integration and social support and lower rates of institutionalization

Mathews, M. (1977) studied widowhood and found that widowhood is a profound life-course transition, bringing a number of losses & changes at objective and subjective levels. Widowhood has negative effects on health, exhibited in higher rates of depression and mental illness

Berardo, F. (1976) studied gender as a differentiation in the experience of widowhood. He indicated that widowers experience more negative health problems, greater social isolation, withdrawn, fewer emotional ties with friends and relatives and restricted social networks

Pehlam, A.O. & Clark, W.F. (1987) studied the relationship between race and ethnicity associated with the likelihood of becoming widowhood. They found that white and black widows tend to be live alone, Hispanic and Asian widows live with others. They have the largest household size and number of offspring while white widows have the smallest household size and number of offsprings.

Unlenberg, P & Myers, M. (1981) estimated that between 10 and 13% (of elderly population have experienced divorce). They also noted that divorce rate

among the elderly is much lower than younger group. Also that divorce rate has increased greatly in all age groups and is expected to continue to increase.

Hennon, C G (1983) found that divorced elderly are disadvantaged compared to elderly with respect to economic situation, family and kinship relationship, mortality, physical health and emotional ties.

Glick, P (1979) found that remarriage rates among the elderly are low. The remarriage rate for widowers was 20% and the rate for widows was 2%. Remarriage rates are far higher of men than women. Factors promoting the likelihood of remarriage are good health, adequate financial resources, and having one's friends and relatives support the remarriage. The main reason most older people remarry is for companionship.

Ward, R L (1979) studied overall effects of lifelong singlehood and found that they have the qualities of independence, self-reliance and habituation of living alone. Further these individuals do not experience the desolation of widowhood or divorce. In later life, the singles are happier and have better physical and mental health than divorced and widowed elderly. Compared to marrieds, singles have rate of suicide and institutionalization.

Shanas, E (1979) found however considerable diversity in patterns of associational solidarity. The first concerns gender difference; she found that

daughters tend to have more frequent interaction with parents than sons, marital status is a second predictor, with evidence indicating that widowhood brings more frequent contact with children and unmarried children have more contact with parents than married children. Third, there is some evidence of social class differentials, with working class children in greater contact with aged parents than white collar children. Fourth, ethnic or racial differences account for some variation in contact, Hispanic evidence the highest associational levels and blacks and whites are quite similar.

Gibson, D. & Mugford, S. (1989) found that sibling relationship appear to change in a number of respects. Feelings of closeness and compatibility increase, conflict decrease and rivalry dissipates. Among sibling relationships, the sister - sister tie is the closest of all, and sisters are more likely than brothers to be confidants.

Marshall, B. (1975) claims that with increasing age the fear of death decreases and that older individuals generally face death with a calm and accepting attitude.

Kalish, R. A. (1969) has also claimed that the lowered fear of death in the aged stems from three factors. Firstly, the aged perceive themselves as having less value and fewer prospects for the future; secondly, many aged feel that they have lived longer than expected and that they are on borrowed time, and thirdly,

the aged have to deal with the deaths of friends, peers, family members and so have to accept death

Keller (1984) researched on attitude towards death categorised into six age groups. The analysis indicated that there was no difference by sex on evaluation of death in general. However, females expressed a significantly greater "belief in life" and more feelings of death anxiety than men.

Thorson, J A & Powell, F.C (1988) administered a death anxiety scale to assess personal orientation towards death. Multiple regression analysis indicated that older subjects were significantly less death anxious, less fearful of their own death and more integrated, they showed less self-death discrepancy than young subjects.

Riley, (1980) in a study of 300 elderly subjects (aged 65-95 years) found that the acceptance of death increased with the ages of subjects but was greatly influenced by personal history, role of residence and cultural and economic level.