REVIEW OF LITERATURE

Elderly women have received less attention in gerontological research, though perhaps, they are more vulnerable to oppression, exploitation and discrimination. Ageing brings more miseries for women as compared to men. This is mainly due to patriarchal character of the Indian society and culturally prescribed norms which give higher status to men. Even the name Gerontology has as its reference point, 'an old man'. Additionally, some elderly may also face the PICA syndrome, i.e., Parents in India and Children Abroad syndrome.

In addition, perception of a person as 'young or old' depends on the context in which the individual is perceived. Soodan (1975) has rightly put that ageing has different meanings for different people. For the politician, doctor or capitalist, it may mean the accumulation of wealth or enhancement of power. For the middle class, ageing may mean force retirement and dependence on pension, which continues to lose its worth due to inflationary pressures. For the poor and working class, ageing may mean a state of total dependence and object poverty.

5.1 Concept of ageing.

Literally, 'ageing' is the effects of age. 'Ageing' is a process that
actually begins from the movement a human being is born. For biologists and medical scientists, 'ageing' refers to the deterioration in physiological capabilities. The decline in physical and mental functioning, which is a popular concept of ageing, begins in early 20s of one's life (Cavendish, 1975). Normal ageing or senescence refers to the gradual time related biological process during which the degenerative processes overtake regenerative or growth processes. It is also called primary ageing. Secondary ageing on the other hand refers to the processes that affect the rate at which primary ageing occurs. These include various lifestyle factors. It is the gradual accumulation of minor bodily injuries or degeneration, often associated with a gradual decrease in functional capacity, which affects all human beings to greater or lesser degree, after middle age (Youngson, 1994). In addition, there is tertiary ageing, which refers to the rapid deterioration that may occur just before death.

The systematic study of the psychological manifestations of 'ageing' started relatively late. Serious research on the psychological and social aspects of ageing started only in 1948, with the constitution of the Chicago Committees on Human Development of the Social Research Planning bulletin, 'Social Adjustment in Old Age – A Research Planning Report'. Programmes on ageing were taken in other countries too, some under the supervision of the UN. As a result, ageing has become a subject
of specialized scientific inquiry of interdisciplinary nature in which the social scientists, particularly the psychologists have started taking keen interest.

The concept of ageing can be defined from many aspects, including biological, psychological and sociological.

Handler (1960) defines 'ageing' as the deterioration of a nature organism resulting from the dependent, essentially irreversible changes intrinsic to all members of a species such that, with the passage of time, they become increasingly unable to cope with the stresses of the environment, thereby increasing the probability of death.

Dutt (1988) says, that 'ageing' can be defined as the progression of change in biochemical processes, which determines structural and functional alterations with age in the cells and non-cellular tissues, and hence in the whole organism.

The above definitions of ageing are obviously, dependent largely on the biological dimension. Ageing has also psychological and social determinants. Definitions of ageing keeping in mind these determinants again differ in various aspects.

Comfort (1957) defines 'ageing' as a change in behaviour of the organism which comes about with the increase in chronological age and which leads to decrease in adjustment and hence in fitness, for survival.
Guha (1991) defines 'ageing' by the change in the relationships of the elderly with the social institutions. However, many of these socio-psychological dimensions separating aged from non-aged are not easily measurable and often vary within societies and across cultures.

In India, ageing is more a cultural process. For instance, the marriage of one’s children heralds the beginning of old age for women far more clearly than do a specified number of years. A woman is considered old when her eldest son marries and brings home the daughter-in-law. This juncture is significant because at this stage important changes take place in the role and status of women. This criterion of old age is however, more applicable to women because their cultural roles within the family are more clearly defined than those of men (D’Souza, 1989).

In fact, in rural India, people may not be classified as ‘aged’ by any criterion, biological or chronological, as most of them do not know their age. Instead they assume their relative age by the activities appropriate to their contemporaries and to the progress through the life cycle of their kin in the adjacent generations. In such cases, age is sometimes recognized by association of a person’s birth with special historic events, geo-climatic, astronomical or with socio-cultural events (Bali, 1999).

A number of terms like ageing, elderly, senior citizens, old people are currently used in the practice in the study of ageing. In absence of a
viable alternative criterion for defining the onset of old age in men and women, most layperson and gerontologists have turned to an arbitrary criterion, that is, the age, at which forced vocational retirement takes place for most people.

The popular use of the term 'elderly' is often applied to a forty year range and it has contributed to the popular stereotype that the elderly constitute a homogeneous social group: one of the most persistent and potent images of ageing is that all older people are alike. The definition of the term elderly and aged varies from society to society and has undergone modification over the passage of time. Similarly, the cultural markers for distinguishing an 'aged' or 'elderly' varies, as they are dependent on the life expectancy as well as longevity of population of different societies (Bali, 1999).

The variations in life experiences and outlook among the very old are great. As a result, chronological age becomes less useful as an indicator of ageing. One of the ways of studying elderly persons is to divide them into age groups. There are many such classifications: young-old (60 – 69 years), old-old (70-85 years) and oldest-old (85 years and above). Further, Neugarten (1981) and Rao (1990) found it useful to distinguish between two groups of the very old: the old-old (70 years and over) and young-old (60 to 69 years).
In practice, however, many researchers with regard to 'ageing' set their own age criteria for selecting samples of elderly subjects in their investigations. In addition, some gerontologists prefer distinguishing between early old age (65 – 74 years), and advanced old age (75 years and over), as the population within this age group is heterogeneous. Similarly, Barrett (1972) identifies three periods of ageing: later maturity (58-67), early longevous (68-77), and later longevous (78 years and over).

It must be emphasized that ageing may not be a ‘problem’ for all. For some it may be a symbol of respect and satisfaction in society. Bromley (1966) has rightly concluded that the problem is not so much of ‘being’ old but rather, ‘who’ are the persons really affected by old age. For instance, some take retirement as a shock and punishment whereas for others it works as freedom from a hectic routine or stereotyped life. Sinha (1989) has rightly mentioned that crucial people in the ageing problem are not the old but relatively the younger people for it is the rest of us who determine the status and position of the old person in the social order.

Baltes and Schaie (1976) have observed that inspite of social norms and values favourable for the aged, their problems are manifold. Old people who are not in a position to change themselves according to the circumstances or who cannot make compromise with the latest, feel slighted. The problem of the aged arises only when the needs of the aged
cannot be met be the social groups to which they belong, particularly, their families.

5.2 Living Arrangements

A traditional convention in the Indian family system is that parents are supposed to be taken care of by their offspring. But, the burgeoning of the nuclear family and the separation of the offspring from the parents creates a situation where the old parents have to stay on their own. On some occasions the economic security of the elderly is provided for, by the children but not the emotional requirements. In this context, most of the primary surveys have investigated on the preference of the aged regarding their place of stay and it is found that a majority of them prefer to stay with their children or own family members in old age (Nandal et al., 1987).

The National Sample Survey (N. S. S., 1991) conducted by the National Sample Survey organization, New Delhi assessed the nature and dimensions of the socio-economic problems of the aged. It had a nationwide coverage, of 50,000 households. It was observed that ownership of financial assets and property is low and only 10% of female elderly enjoyed economic independence. As age advances, economic independence decreases.

The highest number of female-headed households is found in the states of Goa, Kerala, Meghalaya and Lakshdweep. Sample surveys
conducted in rural India, reflect a greater degree of financial insecurity among the aged. Inadequate financial resources seem to be of a higher degree among female elderly compared to their male counterparts (Dak, 1987).

The living arrangements influence the amount and type of care, social support and help a person receives during emergency and long term care. The breaking down of kinship and family organizations has put the elderly in a state of helplessness, isolation and economic dependence. It is a pleasure to note that the traditional Indian family structure used and continues to provide the required environment for comfortable living of the elderly. Majority of aged persons reside with their children, in the absence of their spouse, and are supported by them. Table 7 indicates that the percentage of elderly living with spouse and own children is high.

**TABLE 7**

*Living Arrangement of Old Persons in India*

<table>
<thead>
<tr>
<th>Old-Age Home</th>
<th>Alone</th>
<th>With Spouse</th>
<th>With Own Children</th>
<th>With Grandchildren</th>
<th>Other Relations</th>
<th>Not with Relations</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>All India</td>
<td>Rural</td>
<td>0.68</td>
<td>7.31</td>
<td>37.00</td>
<td>48.57</td>
<td>2.37</td>
<td>3.81</td>
</tr>
<tr>
<td>Urban</td>
<td>0.40</td>
<td>5.54</td>
<td>35.26</td>
<td>50.97</td>
<td>2.37</td>
<td>5.05</td>
<td>0.41</td>
</tr>
</tbody>
</table>

(Source: National Sample Survey, 1991)
With more women seeking employment, providing elder care at the family level may become difficult. Add to this, are the problems of mother-in-law and daughter-in-law power equations (Ramamurti, 1997). The loss of status and decision making role was suffered more by ageing women than by men. The arrival of daughter-in-law and death of spouse have affected women more than elderly men (Dak, 1991).

A survey of old age homes in the state of Maharashtra by Dandekar (1996), finds that the prime reason for the aged moving into old age homes is due to the lack of proper care for them within family set ups. The inmates of the old age homes expressed satisfaction with their stay in old age homes compared to their own homes. This finding gives the impression that old age homes are serving as alternative caregivers to those who are unable to obtain familial care. NSS data suggest that 7% of rural and 5.5% of urban elderly were found to live alone. The data shows that for India as whole more females than males live as inmates of homes for the aged. With lack of familial support, the elderly resort to stay in old age homes in case they are economically affordable. The same is true in case of the Goan elderly, especially in those cases wherein the children have emigrated abroad. The PICA (parents in India, children abroad) phenomenon is found to be prominent not only in homes for the aged, but also among community dwellers.
Elderly parents sharing residence with children, is not only a trend in India, but also in several other cultures. In analyzing data from six Latin American countries, Susan de Vos (1990), found that extended family households were the common pattern. Co-residence did vary from country to country, being most common in the Dominican Republic and least in Mexico. In all these countries, it was accepted for a widowed parent to share residence with an adult child. The decision to share households seems propelled by cultural norms and also by financial needs. One must note that the needs need not be in the older people, but instead in the younger generation, such as being single, divorced, or having limited income (Dunn & Philips, 1997). The choice or arrangement for elderly women where residing is concerned, it is observed that the race and ethnicity plays an important role universally. In Japan, less than 10% of women age 65 and over live alone. Most of these women live with relatives in three-generation households. Among those 85 and over, only 5-6% of Japanese women live alone. In most developing countries, families provide housing and care for the very old. There is a clear pattern of elderly widows living with their sons or daughters in the United States too (U. S. Bureau of the Census, 1987).

The severity of old age is felt mainly because of the changing family pattern. In the western countries particularly, family has shown
changes in its shape and scope. First it is the shift from extended to nuclear, and then nuclear to companionship family. The changed shape of family has not been providing shelter to the aged. Old people may be required to make adjustment to their family members who may increasingly resent their presence.

In the National Sample Survey (N. S. S., 1991) of 1987-88, of the elderly, it was found that a majority of the Indian elderly are without their spouse. Table 8 indicates that elderly women from the urban areas about 68.7% are without spouse and in the rural areas the percentage is 65.4% while those currently married were 30.3% and 33.6% respectively. These facts are important as the marital status often influence the living arrangements of the elderly, especially women. The widowed/divorced/single women usually live with children or grandchildren. Table 9 indicates that elderly persons, a large percentage live with their children. In the rural areas co-reside with children is 74.33% and in urban areas it is 74.89%.

While examining, the perception of the aged themselves, on their status in the family and community in the wake of changing societal structure, it was found that the aged felt that they have lost their status due to old age (N. S. S. 1991)
TABLE 8

Rural and Urban comparisons for Indian Elderly

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex Composition</td>
<td></td>
</tr>
<tr>
<td>R 1000</td>
<td>971</td>
</tr>
<tr>
<td>U 1000</td>
<td>1032</td>
</tr>
<tr>
<td>Marital status</td>
<td>CM</td>
</tr>
<tr>
<td>R 74.4</td>
<td>23.8</td>
</tr>
<tr>
<td>U 78.2</td>
<td>20.0</td>
</tr>
<tr>
<td>Living alone</td>
<td>R 12.43</td>
</tr>
<tr>
<td>U 9.52</td>
<td>0.80</td>
</tr>
<tr>
<td>Willingness to move to old age</td>
<td>R 19.8</td>
</tr>
<tr>
<td>home among those living alone</td>
<td>U 18.1</td>
</tr>
</tbody>
</table>

Note: CM = Currently Married; W = Widowed; D = Divorced; S = Separated
R = Rural; U = Urban.
(Source: National Sample Survey, 1991)
### TABLE 9

**Pattern of Support of Old Persons Above 60 Years of Age in India**

<table>
<thead>
<tr>
<th></th>
<th>Spouse</th>
<th>Own Children</th>
<th>Grand-Children</th>
<th>Others</th>
<th>All Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural All India</td>
<td>9.53</td>
<td>74.33</td>
<td>6.32</td>
<td>9.82</td>
<td>100</td>
</tr>
<tr>
<td>Urban</td>
<td>8.98</td>
<td>74.89</td>
<td>6.33</td>
<td>9.80</td>
<td>100</td>
</tr>
</tbody>
</table>

(Source: National Sample Survey, 1991)

D'Souza (1989) observes that change in family structure, living arrangements, and in addition, the mode of sudden retirement adversely affect the old, and further, that the old people are in increasing proportions losing the status and security which they enjoyed in the traditional Indian family structure.

In an interesting study on generational attitudes of elder care in 1984 (Ramamurti & Jamuna 1986), showed that 80% of elderly prefer to stay with their adult children and 81% of adult children did show a voluntary willingness for parent care and were unwilling to place their elderly in institutions. Only 18% parents preferred to be independent by themselves. When the same study was repeated in 1994, there was a shift in attitudes towards elder care. Voluntary willingness towards elder care
was reduced to 68% and about 41% care takers were willing to place their elderly in institutions in order to extent better quality of life for them. Even among the elderly, 47% did not mind going to institutions. Thus there was a noticeable change towards accepting alternative care facilities if family is not in a position to extend care.

Prakash (1999) studied the living arrangements of the elderly in India. She found that living arrangements determine and reflect the social networks and social support a person enjoys. The type of intergenerational interactions, the flow of resources and help form one person to another depends on where and with whom people live. In a sample of rural and urban elderly men and women, she found that a relatively large number of urban elderly women were found to live alone. Children were abroad. Those who co-resided did not necessarily get their psychosocial needs adequately met. It is often economic necessity rather than genuine affection that force co-residence in old age. The major reason for old people to move to old age homes is due to lack of family care. The living arrangements most preferred by the elderly were a joint family system, while the least preferred were living alone, and the most unacceptable was institutionalization. Similarly, Chakravarty et al. (1996) studied 119 widows from the Calcutta Municipal Corporation area, in West Bengal. They found that irrespective of change of status before and after widowhood, almost all respondents are in favour of staying in the families.
The ties are so deeply rooted, the affection so deep and the forgiveness so genuine that even with affordability in living in an old-age home, respondents are eager to stay back in the family ignoring loneliness, neglect and devoid of authority. 80% preferred to stay in the family.

Shah (1993) conducted a study on the inmates of old age homes in the state of Gujarat, and found that lack of homely care was the prominent reason cited by the elderly towards their preference to stay in old age homes. Besides, economic reasons, family quarrels and maybe handicaps were found to be induced the elderly to move into old age homes.

Shyam, Yadav et al. (2000), administered a wellbeing measure, health questionnaire and social support questionnaire to a sample to 30 elderly institutionalized and 30 elderly non-institutionalised persons. It was not surprising, that the non-institutionalised elderly reported significantly high depression and that life satisfaction was high in institutionalized elderly.

The attitude towards alternate arrangements for residence does have its share of mixed views and feelings from the elderly. Sureender (1994), in his study in the Pondicherry district, found elderly couples admitting to aged homes being a good substitute when children crib about finance and freedom. But the status the aged enjoy in society, poses as a deterrent to join the aged home. Mahanta (1995) studied 1008 retired persons, 475 men and 533 women, from Kamrup, Assam. The study showed joint family is breaking up, intergenerational relations are

76
weakening, and the old are isolated. In the absence of old age shelters in Assam, most rural aged with their traditional ways of life suffer multiple problems.

Studies of 'human ageing' began in U.S.A, by the National Institute of Mental Health (1975), and later by Duke University. Healthy elderly individuals living in the community were selected to assess the effects of time and chronological ageing, as well as sickness, institutionalization and social adversity on ageing. It was observed that psychological flexibility, resourcefulness and optimism characterized the group of older people. Such studies observed the importance of environment in adaptation. Environment deprivation is much more crucial than educational and other social factors in maintaining mental health. Home is a familiar place in what maybe a changing and unsteady world. Old people strongly resist the idea of leaving their own house to a strange surrounding, like an institution. Shift in residence brings in fear of the unknown, threat of an unprotected environment, or need to be in contact with familiar people.

Freedman (1996) surveyed the various predisposing factors that may render the elderly to an institution. He concluded that those above 85 years, female, unmarried or living alone, issueless, cognitive impaired, or having problems with instrumental activities of daily living are most prone to being admitted to an institution.
Most research findings paint a rather grim picture of what lies in store for the elderly, when they live alone. However, there is also a new sense of independence found among the elderly when it comes to living alone again. Most patterns for living change, after the age of 75 years. It is found that older women are less likely to live with other family members after the death of their spouse than they were in the past. While still in need of social interaction and support services, widows are often relieved of the responsibilities of caring for spouses who were ill. Depending on their own health, these women may be freer to direct their time and interests towards their friends, grandchildren, hobbies and activities than they have been at any other time in their lives. In a qualitative study of older widows' experiences, four themes emerged: 'making aloneness acceptable, going one's own way, reducing one's risks, and sustaining oneself' (Porter, 1994).

Given the present context of living conditions for the elderly, and the immense influence one's living arrangements has on one's quality of life, one of the aims of this study is to study the effect of living arrangements on the adjustment and mental efficiency of elderly women. Before proceeding to reviewing the research literature of the effects of living arrangements, it is imperative to note that adjustment and mental efficiency were chosen as they are broad dimensions that cover most aspects of one's life.
5.3 Living arrangements and adjustment.

A great deal of research interest has been devoted specially by gerontologists to identify some operational criteria for the evaluation of the quality of adjustment and finding out the correlates of good adjustment in old age. Donahue et al. (1960) have cited following factors positively associated with good adjustment in old age. Satisfactory health, married life, good family relationship and friendship were among factors like participation in leisure time and other activities, feeling of security, social status equal to that held previously, plans for future, religiosity and belief in re-birth.

Anantharaman (1979, 1980) investigated the factors that affect adjustment to old age. He covered 172 elderly aged 55-89 years, in Bangalore City. They found that adjustment was positively correlated to education, occupation, income and social class and negatively correlated with age in old age. He has reported that elderly who had positive self concept, lived with their children and enjoyed good health, were better adjusted than those who had negative self concept, were living an isolated life and were not in good health. The more the number of activities, the better is the adjustment in old age.

The feelings of economic insecurity are the highest in old women and in fact education and economic condition are associated with better
adjustment. Crandal (1980) found that loss of role due to separation of children is perceived as one of the causes for poor adjustment among women. Aged women are found to have more inferiority feelings and are less in psychological well being which are also contributory to poor adjustment among them (Berg 1980).

Jamuna (1989) examined the role of several variables contributing to good adjustment. 300 women aged 60-69 years, from the semi-urban Chittoor district of Andhra Pradesh were studied. She found that positive self regard, satisfaction with role activity, satisfaction in relationship with spouse, and subjective assessment of general health were important contributors.

Among these factors for adjustment, living arrangements stand out. The effects of staying in one’s own home, in the community or having to shift to a home/institution for the aged, will have a pronounced effect on one’s adjustment in later life. The differences in adjustment, due to living arrangements are noted herein.

Anatharaman (1981) conducted a study to investigate health and adjustment related differences between institutionalized and non-institutionalised elderly people. Fifty men residing in a home for the aged and fifty males living with their children were interviewed. It was found
that the institutionalized had poor health perceptions, reported more physical and psychological problems and had more problems in adjustments than non-institutionalised subjects. Life satisfaction was significantly higher for the latter. Chandrika and Anantharaman (1982) compared the adjustment and life changes in three groups of older people: non-institutionalised, institutionalized and geriatric patients. The life satisfaction index showed that non-institutionalised older people are better adjusted than the other two groups.

Singh, Singh and Dawra (1983), in their study found that the older elderly face adjustment problems related to emotional, social, health and home areas. The non-institutionalised had no gender differences in areas in problems; however, among the institutionalised there were significant difference in gender. The women faced more psychological, social and economic problems significantly. Therefore, besides living arrangements, the gender, i.e., being female, may compound adjustment problems.

Baum and Buxley (1984) studied differences in age and perceived death anxiety in 301 elderly people. These were divided according to those who were institutionalized, community affiliated and community alienated. It was found that community affiliated ones showed lesser death anxiety, while the others were high on emotional ill health and death anxiety.
Chadha (1989) studied the impact of institutionalization on psychological well-being. It was found that older people in institutions were worst on psychological well-being and their depression levels were very high as compared to non-institutionalised older persons.

Gandhi and Borah (1990), investigated the problems of 200 senior citizens, aged 60 years and over, from institutionalized and non-institutionalised settings. They found that institutionalized elderly faced more problems in all areas like physical, financial, family, social and personal adjustment, except health than the non-institutionalised elderly.

Chadha, Aggrawal and Mangla (1992) based on their study of 200 persons, 32 institutionalised and 168 non-institutionalised, in Chandigarh, found that institutionalized males and females had a significant lower levels of life satisfaction. In addition, institutionalized females further and reported lower life satisfaction than those non-institutionalised. The reason being that non-institutionalised elderly are better adjusted as like, their institutionalized elderly, they are not isolated from the community. In addition, institutionalised elderly do not have much autonomy and independence – important aspects for the psychological well-being of an individual.

Chadha, Easwaramorthy and Kanwara (1993) studied a sample of 160 individuals aged 62 years and over, of whom 80 are from institutionalized settings (old age homes) and 80 are from residences and homes, in Delhi. They found that non-institutionalised reported better
health and physical well-being than the institutionalized. They reported less loneliness, helplessness and more satisfaction with life. Chadha (1994) further attempted to see the impact of institutionalization and non-institutionalised setting to the psychological well being and depression. Older persons in non-institutionalised settings are better on psychological well being and their depression level was low as compared to older persons in institutionalized settings. Age therefore also has its own effects on adjustment.

Nandhini and Parvathi (1996) chose from the city of Madras (Chennai), a sample of 30 noninstitutionalised and 21 institutionalised senior citizens. They were matched on age, occupational status and on pension. Using Beck's Depression Scale, and PGI sense of well-being scale, they found that institutionalized senior citizens had a significantly lower level of sense of well being as well as lower depression levels than the non-institutionalised senior citizens. This could be because those at home are emotionally secure and hence more likely to open up to the family/significant others in the house. Institutionalised citizens do not have the same love, care and attention and turn inward towards themselves.

Mathew (1997) studied 100 institutionalised elderly from 7 old age homes and 100 from community. Life satisfaction was compared. Life satisfaction was more among home bound than institutions. Other variables like education, age at marriage, number of living children and
number of friends also had positive correlation on their life satisfaction level.

Coutinho et al. (1998) chose a purposive sample of 46 widows, age ranging from 60 to 72 years. Results show that institutionalized widows had poor adjustments in the areas of health status, emotional and social adjustments. Their tolerance levels were low leading to many conflicts among the other inmates. Women at home were poorly adjusted in the area of emotional and home life. This could be attributed to contradicting views of the daughters-in-law and younger generations, also decrease in living space, considering the study was in Mumbai. However, the self esteem of institutionalized women were poorer than those living at home.

Barnes et al. (1998) compared the institutionalized elderly and non-institutionalised elderly to evaluate the impact of the financial, social and emotional support on their adjustment using a self-constructed psychosocial scale. They chose a sample of 30 elderly, aged 60-95 years. 15 were institutionalized and 15 were non-institutionalised. There was a significant difference in the emotions, social and psychosocial adjustments in both the groups. The non-institutionalised adjusted better than the institutionalized. Majority of the non-institutionalised group had spouses with them as support system (47%), in comparison to the institutionalized group (7%). However, the institutionalized group did have more positive attitude towards ageing, having reconciled to their fate.

Katyal and Bector (1999), covered 40 elderly, aged 65 years and
over, from institutions and family. Quality of life (QOL) in terms of respondents own assessment of satisfaction was taken. It was found that QOL was highest among the family based. Old people are happiest in the family.

Gaur and Kaur (2001) studied the institutionalized and non-institutionalised elderly. It was reported that non-institutionalised elderly had a higher score for life satisfaction than institutionalized elderly. The non-institutionalised elderly are much better adjusted and more satisfied than institutionalized elderly. Institutionalized elderly felt isolated from the community, in a set up that does not give autonomy and independence.

Guelduer (2001), studied 138 cognitively intact and ambulatory elderly, aged 60-95 years, in nursing homes and independently in community. They were administered the Profile of Mood State (POMS). Community elders reported greater life satisfaction. Nursing home residing elders scored higher on the Depression, Tension-Anxiety and Confusion-Bewilderment subscales of POMS.

5.4 Marital Status and adjustment

The marital status analysis of the elderly gains prominence as the married fare better than the single on a number of dimensions. A major concern in this regard is the increasing number of elderly women in general and widowed in particular. Two prominent reasons cited for a great gender disparity in widowhood are because of the higher life expectancy at birth.
and the recent trends in mortality favouring females. Contributing to this is the universal tendency for women to marry men older than themselves. Also widowed men are much more likely to remarry and overcome their widowed status (Dave P. & John G. 19, Myers 1986, Chanana & Talwar 1987).

A study done by Indra (1963) in a village Ratan Garh, showed a deviation from the traditional Hindu family pattern. This study showed that old women, maintain their status under the following conditions, namely, if their spouse is alive, secondly, if they are physically able to perform some gainful functions for the family. Thirdly, if they behave well towards other members of the family and, finally if they have valuables in their possession.

In India, more than 65% of women live without a spouse. There were around 10.8 million widows in 1982. According to the census of 2002, there were 33 million widows in India, and 64% of them were above 80 years. Married women are assumed to fare much better than those widowed or single on a number of dimensions. As a result, the marital status of the aged women comes in to the forefront.

The Ageing Survey, carried out by S. Irudayarajan, U. S. Mishra and P. Sankara Sharma (1999), investigated the aspects of general feeling, living arrangements, living support, health, nutrition, and elder’s involvement in social and religious matters. States of Kerala, Tamil Nadu, Gujarat and Karnataka were covered with a size of 2253 persons aged 60
years and over, 928 of them being women. They found that widowhood was predominant among elderly women compared to men.

Ramamurti (1997), had a research project on Rural Population of Bihar, confined to the Purnea district. All the aged were still staying with their family. Finding showed that the relationship between spouses is a central feature of an individual’s social and emotional life. Among the various factors this contributes to adjustment in the middle and later years. The nature and level of communication between husband and wife appears to be an important factor to a happy and well-adjusted life.

Ageing women are particularly more susceptible to social isolation as a result of the loss of their role as wife due to widowhood. For some there is a role reversal wherein now they have to shoulder major family responsibilities. Removal of marriage symbols and signs is common among all communities. Invariably all widows face problems in their personal and social life, be it, restrictions in dressing up or companionship.

Palmore, Nowlin and Wang (1985), in a longitudinal study of a group of older men and women, studied in 1972 and again between 1980 and 1983, investigated the kind of decline occurring after 65-70 years. The average age of the group at follow-up was 81 years. Areas evaluated included social functioning, economic stability, mental health, physical health and the ability to perform the activities of daily living. The group as a whole experienced no significant decline in social functioning or economic stability over the 10 year period. There were moderate declines
in mental and physical health and in the ability to perform the activities of
daily living. Those who were married maintained higher levels of
functioning in most areas. The very oldest adults showed the most marked
decreases in all areas, which may be a result of the greater interrelatedness
of functioning among those over 80 years. In those, who are very old,
when one area of functioning declines, difficulties in many other areas
arise, i.e., loss of spouse may result in social withdrawal, loss of
sleep/appetite etc. all of these changes can produce a rapid deterioration of
the respiratory, circulatory and metabolic systems.

Carr et al. (2000) investigated the marital quality and
psychological adjustment to widowhood among older adults. They studied
1532 persons, aged 65 years and over. Their study assessed whether
marital quality (warmth, conflict and instrumental dependence) affected
adjustment to widowhood. 203 persons were reassessed after 6 months.
Results show widowhood with elevated anxiety existed among those
dependent on spouses. Levels of anxiety were higher for those reporting
marital closeness and dependence on their spouses. Women who relied on
their husbands for instrumental mental support had higher levels of
yearning than men who depended on their wives.

Typically widows outnumber widowers. In India, widows are far
more vulnerable to isolation, abuse and every type of ill treatment. They
have situations that call for adjustment. Widowhood in old age implies
loss of the emotional support from spouse. The death of the husband
brings in its wake manifold problems. Coping with widowhood is enhanced if there was possible forewarning about the spouse's death. This gives women an anticipatory period of realization and preparation for widowhood, because of which they are able to adjust better. Also with the help of children and grandchildren, women are better able to cope with their widowhood. However, given the support the widows may receive, after the loss of their spouse, never compensates enough for the companionship of one's mate and no social support can adequately substitute the loss of companionship.

The relationship between life satisfaction and marital status does not only differentiate between the married and widowed, but also married and unmarried. Cavien (1949) studied relationship between life satisfaction and marital status in old age. The result of the study showed that married older people are more satisfied with their life than unmarried older people.

Jamuna and Ramamurti (1988) assessed the adjustment levels of widows and non-widows between 40 to 70 years, using the Ramamurti’s Adjustment Inventory. The sample was from middle class families in Tirupati. They covered 150 widows and 150 widowers, from three age groups of 40-50 years, 50-60 years and 60-70 years. Results indicated poorer adjustment among widows than non-widows.
Gurudoss and Lakshminarayan (1989) studied 20 married and 20 widowers, elderly, from Coimbatore. They found that the married had better life satisfaction than those who lost their wives. Chadha and Aggarwal (1990) & Chadha, Aggarwal and Mangla (1992) conducted a study on 109 elderly men and women. Measures were taken on life satisfaction, hopelessness and alienation. It was found again married older people were high on life satisfaction as compared to their widow/widower counterparts.

Chakrabarti (1993) examined the health, living arrangements and problems of adjustment among 61 respondents, from 10 villages in Nadia, Bengal. Adjustment was measured as a self-evaluated quality of relationship with members of the family. It was found that adjustment depended on the presence of a spouse, status in family and health.

Lalitha and Jamuna (2004), focused on the psychological and social adjustment in a sample of community living elderly widows (120 persons) and widowers (120 persons), from three districts in Andhra Pradesh. They studied the coping styles of those who had lost their spouses in the last twelve months. These were further divided into two age groups: 60-65 years and 66-70 years. They found that generally, widows reported more problems of adjustment than widowers (p<.01). With advancing age, the reported problems also increased. Widows reported problems in the areas of health and economics, while widowers reported problems in the areas of self and emotion where adjustment is concerned.
While most research indicates decline in life satisfaction for widows, the same maybe true for widowers also. Chipperfield and Havens (2001), conducted a longitudinal study covering 2180 individuals, aged between 67-102 years. The sample was interviewed in 1983 and 1990. It was found that women's life satisfaction in general declined after 7 years, regardless of whether having a spouse, lost spouse or gained spouse. Men's life satisfaction on the other hand, depended on the presence of a spouse. Jayashree and Rao (1990), in their study, covering 260 urban, literate men aged 55-85 years, found that older males with spouses living showed better social adjustment.

There is a strong connection between marital status and whether institutionalization will take place and research has also explored the joint effects of marital status and living arrangements on one's adjustment. Before reviewing research in that regard, it is interesting to note how marital status determines one's living arrangements at later ages, that is, whether placement in a home/institution will occur. Ramamurti (1970), found that those who were better educated had better incomes and were married and living in joint families, were better adjusted.

Fengler, Denigelis and Grams (1983), in a survey of 1400 older Americans, over 65 years, chose persons who lived alone or with others and compared them with older married couples. From all groups, the greatest number of elderly people with low life satisfaction was the

91
widows who lived alone as their income was inadequate. It was also found that the widows reported very low life satisfaction in comparison to the rest of the sample.

Freedman (1996) found a relatively high proportion of single, divorced, and widowed elderly people live alone in institutions. A spouse is the first line of defense against institutionalization. If they are physically able, husbands and wives provide the care-giving when a spouse is having trouble functioning.

Hasnain and Kapoor (1997) conducted a study of 195 elderly persons in the age range of 60-75 years, from Rampur City. Among them 166 were living with their spouse and 29 were without spouse, though they lived with their families. With regard to adjustment at home, 74% reported well. Interestingly, none reported maladjustment at home or society.

John et al. (2001), conducted a secondary analysis of the Canadian Study of Health and Aging, conducted in the period 1991-1997. Data from 8474 community-dwelling seniors in all Canadian provinces were covered under this study. They found that never married and previously married persons were more likely to die or be institutionalized than married persons.
5.5 Social support.

Another prominent factor affecting an elderly later years, is the social support they receive. The Alameda County Population Monitoring Study demonstrated that a simple measure of social network was a significant predictor of longevity. Their measures included marital status, number of close family and friends, church membership and group membership. Moreover, it was found that women, more than men, benefited immensely from such networks (Berkman & Breslow 1983).

Antonucci (1990) used the term social convoy to describe the network of close relationships that accompany an individual throughout life. Throughout adult years, women seem to have larger social convoys than men, and they maintain their friendships longer than men do. Because women have larger social convoys than men, they are more likely to suffer psychologically because of the negative life experiences that befall their friends, confidants and spouses. Social integration and membership in meaningful social support network are also associated with increased longevity. Longitudinal studies have demonstrated that a high level of social integration is associated with lower mortality rates. (Rowe & Kahn, 1997).

Ageing takes place in a social context. At every stage, an individual belongs to a variety of kinship and social groups. The extent to
which an older person is enmeshed within a social network of kin, friends and neighbours will greatly affect their experience of ageing. Therefore the role of informal social supports from family, friends and neighbours is an important issue. The quality of the relationship between an adult child and an aging parent has a long history. The nature of support that an ageing parent is able to receive or that an adult child is willing to provide is influenced by the feelings of closeness and connection that were fashioned during the childrearing process and also is the child’s relationship to the parents during early adulthood years.

The sources of social support an elderly are likely to receive from are:

1. Family: at any stage, family is an important social support system. Besides fulfilling personal and emotional needs, the family is a source of providing instrumental and financial assistance.

2. Siblings: studies indicate that sibling ties are maintained in old age and these can be very important in the lives of the aged, especially for the widowed or divorced, who may depend on their siblings for support and help that they may normally get from their spouse.

3. Friends and neighbours: for those who have no children and others whose children may live far away from them, friends and neighbours serve as the primary social support system. It is in the area of socialization and tension-reduction that the network of friends and neighbours is most
significant for older people. Their steady interaction with them, offers a way of using time, but is also a principal avenue in case of many elderly people for ego-testing and reaffirmation of personal worth. Friends build a sense of kinship between people based on common needs and interests, and most of all, a shared trust.

Barron and associates (1994), investigated relationships between marital status, social support and loneliness in visually impaired elderly people. The study covered 87 subjects, aged over 65 years. Marital status is related to support network composition. Married and widowed respondents received most of their support from family members, whereas the never married subjects received most of their support from non-family members. When the spouse, children are not social supporters, others relatives, siblings, neighbours and friends formed part of the social support network.

In order for the very old to transcend the limitations of their daily living situations, they must be convinced that they are embedded in a network of social relationships in which they are valued. Their value cannot be based solely on a physical exchange of goods and services. Rather it must be founded on an appreciation of the person’s dignity and a history of reciprocal caring. Though social support has shown huge evidence of positive effects, one has to note that there are instances
wherein the effects maybe complicated with issues of reciprocity. Even though they are comforted by knowing that support would be available when needed, older adults are likely to experience negative feelings when the support received is more than was needed or when there is no opportunity to reciprocate (Liang, Krause & Bennett 2001). The benefit of receiving social support can be diminished if the recipients adhere to a strong cultural norm for reciprocity. The norm of reciprocity implies that one is obliged to return in full value what one receives. Being in someone’s debt may be considered stressful and shameful. In a study of Japanese American elderly, receiving material support from their family was associated with higher levels of depression and less satisfaction for life, especially for those who have very traditional values about reciprocity. Krause (1995) identified the long-term risks of providing too much social support. Initially social support can reduce chronic financial strain and reduce depressive symptoms, but over time it is associated with increased psychological distress among care recipients. Social support can also prove problematic if it is provided with great reluctance or if it is absent and truly needed. Therefore the general principle of trying to mobilize social support to enhance the functioning of the very old has to be modified, at times, to include sensitivity to the context and meaning of the support (Nemoto, 1998).
For the Indian woman, social support has an additional dimension of family relationships, especially that of the daughter-in-law. The traditional stigma attached to the daughter-in-law and mother-in-law relationship may affect social support the elderly woman receives. Psychological analysis of the case studies of mother-in-law daughter-in-law relationship reveals certain logical facts. The mother-son relationship until the son's marriage is usually a very affectionate and emotional one. But soon after marriage, the son discovers a very intimate emotional involvement with his wife who cares and loves him, which in turn, results in him showing less involvement and dependency with his mother, who feels hurt. She perceives the cause for the less attention to her from her son, is her daughter-in-law, thus straining the social support atmosphere within the family.

One classic study of the role of social support plays in later ages is *The Berkeley Older Generation Study*. It was a longitudinal study to cover the entire lifespan, exploring personality and social development in a cohort born in the late 1920s in Berkeley, California. Psychologists selected a large group of children, tested them and their parents periodically through adolescence and again at regular intervals throughout adult life. Approximately 420 men and women who were first interviewed in Berkeley, California, in 1928 and 1929. The participants in the study
were tested over a 55 year time span that has encompassed their young adulthood, midlife and older years. Field and Minkler (1988) examined the longitudinal continuity and change in social support in 47 old-old (74-84 years), and 27 very old (85-93 years) elderly of the Berkeley Older Generation Study. In beyond family contacts, declines were observed for men but not women.

Today, research is still being carried out on the surviving parents and children. Over a 30 year period, Laura Carstensen (1995) discovered that beginning in early adulthood, one starts to reduce the number of social interactions. Over this time, people develop more intense relationships with those people they are closest to in life. Thus, selective disengagement takes place. Older people vote overwhelmingly to be with a family member, who is the most emotionally central individual in their life.

According to Carstensen, any time one sees the future as limited, one re-centers one’s lives around the most immediately gratifying people and experiences in life. Women have closer relationships with family and friends to cushion the blow of loss of spouse. In the Berkeley/Oakland parents, Dorothy Field (1997), found that friends remain important to older women, they can offer a widow special support because they too are likely to be widowed.

Lenard and Abraham (1991) investigated the influence of
progressive ageing on the social lives of elderly tenants. Two hundred and
ten residents of two enriched housing facilities were chosen as subjects.
Declining health was associated with declining size of the external social-
support network. The number of available social support was positively
correlated with life satisfaction.

Subramanian and Asha (1991) investigated the relationship
between the social support and role activity, role involvement and
adjustment of elderly women. A group of 206 elderly women, aged 55 –
80 years, completed inventories measuring perception of social support,
role activity, role involvement, and adjustment. Findings indicate that
women having better perception of social support are more role-active,
more role involved and well adjusted than those having poor perception of
social support.

Nathawat (2000) evaluated the influence of hardiness and social
support on psychological well-being on 120 educated, retired men. He
found that those who were hardy and high on social support have
significantly better psychological well-being than those who are low/non-
hardy and have low social support. The psychological well-being very
much depends upon how a person is valued by those around him. There
seems to be a connection between marital status and social support. On the
whole widows tend to have less social support. Ferraro and Barresi (1982),
examined the impact of widowhood on the social relations of individuals widowed less than one year, more than a year, less than or equal to four years and those widowed more than four years. It was found that those who were widowed more than four years, reported decreases in family interaction and support.

Morgan’s (1984) longitudinal study of family interaction following widowhood found a decrease in the total amount of interaction with relatives among widows and widowers due to reduction in the size of the family network. Frequency of interaction with remaining kin increased for widows.

Thompson (1989), attempted to determine the relationship between the different status the elderly have and their social network. Of the 334 elderly residents of British Columbia, Canada, it was found that those with strong social networks were healthy and happy. Women who are widowed happened to be among those whose social networks were small.

Since Indian females are financially dependent and are usually confined to their homes, they enjoy less social support than their male counterparts. Therefore life satisfaction could have a gender bias. But more than that, widowhood and living arrangements are also intertwined with social support, to the extent wherein social support however, has the maximum effect. For instance, on the adjustment of elderly women in
institutions (Vaz et al., 1999), it was noticed among elderly women in the ages of 60-80 years, a large number of them had a positive attitude towards these homes. And they agreed that it was a necessity in today’s time. Some came to the home out of their own free will. It was observed that many continued to receive support from their family and hence adjusted better. Of course they still believed that the homes for the aged could not be compared to a family.

Gray and Calsyn (1989) reported that social support has a buffering effect on stress and is correlated to adjustment. Similarly, Subramaniam and Asha (1999) investigated the relationship between social support and adjustment of elderly women. A group of 206 elderly women, aged 55 to 80 years, completed inventories measuring perception of social support and adjustment. The findings indicated that those women having better perception of social support were better adjusted. Similarly, Ramamurthi (1969) found better adjustment for those aged subjects whose spouses were living and those who were living in joint families.

Nathawat and Rathore (1996) studied the influence of hardiness and social support on the well being of 200 retired elderly men and women aged between 60 to 70 years. They found that with regard to social support, old people with high social support obtained significantly more
life satisfaction scores and satisfaction with life scale scores than their counterparts who were low on social support.

There is a strong relationship between institutionalization and social support. Institutionalized elders are limited where social support is concerned because of the environmental constraints of living in an institution.

Chadha and Nagpal (1991) studied the differences between institutionalized and non-institutionalised subjects. They found that social network size of institutionalized groups is significantly smaller than their non-institutionalised counterparts. Also they had higher life satisfaction as compared to the institutionalized and that social support and life satisfaction were significantly related to one another.

Nishi and Chadha (1991), examined life satisfaction and social support network of 60 institutionalised and 60 non-institutionalised elderly aged 58 years and above. It was found that both the quality and quantity of support are important for the elderly. Social support had a positive effect on life satisfaction. Chadha (1994) assessed institutionalized and non-institutionalised elderly, after matching them on marital status, age and SES. Findings indicated that older non-institutionalised persons scored higher on psychological well being and had a low depression level compared to institutionalized subjects. Family support was observed to be an important factor in this regard.
Gee (2000), in a study, covered 830 persons aged 65 years and above. Three dimensions of quality of life—satisfaction, well-being and social support, were examined for married men and women (living with spouse v/s living intergenerational), and widowed women (living alone v/s living intergenerational). Few differences were found for married persons but for widows, living alone reduces quality of life, especially well-being.

Ramamurti (1970) in a study of 247 urban aged men from the urban background, educated beyond middle school, found that there was better adjustment for those whose families were living in joint families and had higher income. Also, it was found among these men that widowers were not so adjusted as compared to the married, and that higher educated were better adjusted than lower educated.

Bhatnagar and Randhawa (1987) studied 87 retired males from Patiala city of Punjab. They found that those who were better educated and economically better off, with an urban background secured higher scores on the Life Satisfaction Index.

In a study by Ushashree and Sunanda (1988), a sample of 40 educated women, aged 35 to 55 years from Tirupati, were compared for adjustment with 40 uneducated women. Results found that the uneducated women were significantly lower on adjustment and self-confidence.

Lakshminarayanan (1993) compared the adjustment between 40 male and 40 female rural aged persons from the Coimbatore district. It
was found that males were better adjusted than females, due to better education, whereas most females were largely illiterate.

Nandhini and Paravathi (1996), studied adjustment, depression and sense of well-being among senior citizens. They chose 15 males and 15 females senior citizens, retired bank officers from Madras (now Chennai). They found that levels of depression and adjustment were negatively correlated, that is, higher adjustment, lower the depression.

5.6 Mental Efficiency

Comparatively, with regard to research, studies focusing on mental processes are limited where psychosocial research is concerned. However, there are significant findings in this area. Research indicates that old age need not be accompanied by mental deficiency, biologically. In fact where mental efficiency is concerned, more than biological processes, environmental factors, coupled with age, marital status and social support play an important role. Labouvievief et al. (1976) have reported that lack of environmental stimulation among the aged affects adversely their mental and motor learning.

*The Baltimore Longitudinal Study of Aging* begun in 1959, in the U. S., by the National Institute of Aging (1993). Subjects ranged in ages 20-90 years. Depending on their age, they were periodically evaluated every one or two years, at the Gerontology Research Center in Baltimore.
Physical capacities were examined, besides learning and memory. Also personalities and methods of coping with stress were probed. The subjects were upper-middle class group. The Baltimore Study shows that there are actually several aging patterns. In a common pattern, physiological loss occurs, but only when a person develops an age-related illness. For instance, researchers found declining testosterone only in their older male subjects, who were ill. Another ageing pattern proposes that functions remain stable, either staying unchanged or declining only in the terminal phase of life. For instance, the number of white blood cells did not drop as volunteers returned over the years. However, in those where a decline was observed, they were most likely to die before the next evaluation. Declining immune function does seem implicated in ageing and death. In another pattern, loss occurs, but one’s body compensates physiologically for the change. The most fascinating example occurs in the brain. As the years pass, one does lose neurons. However, some cells grow more robust, adding new dendrites and establishing new connections, helping preserve thinking and memory in old age.

The most central and defining study of age and intelligence is *The Seattle Longitudinal Study (SLS)* of K. Warner Schaie and his associates, which began in 1956. Initially 500 participants between 22 and 70 years of age were administered the Primary Mental Abilities Test. They were
retested, along with new groups of individuals, at 7 year intervals in 1963, 1970, 1977, 1984 and 1991. The study was a combination of six cross sectional studies and one longitudinal study covering a 28 years period, testing more than 5000 individuals. The researchers first selected groups of volunteers and participants in a health organization, 7 years apart in age and compared their scores. Then, they followed each group longitudinally, testing them at 7 year intervals. Simultaneously, another cross sectional sample was selected, some of whom were also followed over time. Schaie used the Thurstone’s primary mental abilities scale (PMA), which included verbal meaning, spatial relations, inductive reasoning, number and word fluency.

On average, from the continuing Seattle Study, intelligence, as measured by traditional tests, increases until midlife (the early 40s), then plateaus until the mid 50s or 60s, and then starts to decline. After 60 years, the 7 year losses are statistically significant for all five PMA scales. Different abilities show different patterns of aging. Scores on tests measuring speed related fluid skills such as inductive reasoning or spatial relations begin to decline by early 30s, and measure of crystallized skills such as verbal meaning stays stable or rises until the 60s.

In fact, on the two non-timed vocabulary tests Schaie’s volunteers performed at their peak at age 67. When Schaie looked at the proportion of
people at different ages that had declined on one or more tests over a previous 7 year period, he found more encouraging news. By the age 60, virtually everyone experienced a loss on one facet of intelligence, even among the oldest. Virtually, no one declined significantly on all five primary abilities. Moreover, loss on most facets of intelligence group was never typical. Even by the late 80s, only 50% of the volunteers experienced loss on 3 or 4 out of the 5 primary abilities.

As Schaie’s research team began publishing their results, psychologists changed their thinking about intelligence and age. The ‘contextual perspective on intelligence’, puts forth that intellectual change is multidirectional and individual-specific, and that, rather than making generalizations, one needs to explore the conditions and contexts promoting intelligence in the older years.

In Schaie’s study, only one-third of the participants showed a significant decline on any ability between 74 and 81 years of age. Only 2% of the individuals showed a decline on the 5 abilities in this age group. Overall no participants displayed constant intellectual decline on all five primary mental abilities over the 28 years, suggesting that all-pervasive intellectual decline is more mythical than real. A significant percentage of individuals maintain most of their intellectual abilities well into old age.

On the basis of extensive longitudinal research, Schaie (1994) identified seven factors that are associated with cognitive functioning in later life:-

1) Cardiovascular and other chronic diseases.
2) Environment linked to high socioeconomic status
3) Involvement in a complex and intellectually stimulating environment
4) Flexible personality style at midlife
5) Cognitive functioning of spouse
6) Maintenance of a high level of perceptual processing speed
7) Satisfaction with life accomplishments in midlife.

Could the negative effects of these factors on mental efficiency be reversed? In another systematic programme, called the Adult Development and Training and Enrichment Project (ADEPT), in the late 1970s, Schaie and his colleagues, tried to demonstrate that age-related I.Q. changes could be reversed. The ADEPT researchers specifically targeted fluid abilities, the more biologically based aspect of cognition (Willis, 1989). These cognitive remediation studies show that training in inductive training or spatial relations improves performance on these fluid tests. In addition, a person’s scores on other tests of the same fluid ability improve. In the Seattle sample, after training, older people who had lost points improved to where they had been 14 years before. Those who had been relatively stable performed at a higher level than in middle age. The extent to which people profit from cognitive remediation varies. Some do well, others do not improve. There is, however, an upper boundary beyond which people cannot go.

With improved understanding of ageing and the importance of health
care and supportive environments, it was found that older people can function better at the same age than their parents or grandparents did (Eastwood, 1995). The negative changes associated with ageing, could be due to stress and disease rather than the ageing process itself. Senility, which is associated with symptoms as impaired attention, memory loss and disorientation in time and place, is actually a disease and affects only a small number of older people. When age-related decline in cognitive functioning occurs, it is usually limited to only some abilities.

MacDonald and Dixon (2001), studied the relations between physiological and cognitive function in older adults. 455 adults aged 61-95 years, were taken from The Victoria Longitudinal Study (VLS). The physiological indicators considered were blood pressure, peak expiratory flow, visual and auditory acuity, body mass index and grip strength. Cognitive measures included reasoning, processing speed (perceptual and semantic), and memory (working, episodic, semantic). Physiological-age and physiological-cognition relations were examined. Results showed that physiological status significantly predicted level of cognitive performance independent of age. Moreover, significant relations between physiological status and cognitive performance among adults aged 83-95 years were greater in number and magnitude compared to those aged 67-82. Impaired physiological status was generally associated with poorer cognitive performance.
One must admit that there is difficulty, however, in interpreting data from empirical research, since longitudinal studies have a high dropout, conserving those with superior intellectual function. Also there is the presence of physiological pathology to be considered. For instance, Schaie’s research team found that men and women with heart disease lost points earlier than healthy volunteers on all five PMA abilities. Heart disease affects how one functions intellectually at any age because poor cardiovascular function reduces the amount of blood getting to the brain. Because heart disease causes slower reaction times, it affects performance on any fluid intelligence test (Earles & Salthouse, 1995). Since illness causes IQ scores to decline, performance loss on intelligence tests due to age, could be a symptom of impending death. The concept is called the ‘terminal drop hypothesis’ (Berg, 1996). Elderly people subsequently ‘lost’ to the Seattle Study because they died, it turned out, had had especially large declines on the crystallized PMA tests at the previous evaluation.

Then there maybe the genetic factor also playing a role in cognitive ability. *The Swedish Adoption/Twin Study of Aging* is a Scandinavian genetic study in which identical and fraternal twins adopted into different families were reunited and compared in late middle age. During the 1980s, researchers tracked down 99 identical and 229 fraternal Swedish twin
pairs who had been separated from their biological parents and adopted into different families before age 10. These twins, many of whom were over 50 years at the time, were reunited and given an extensive evaluation (Plomin & McClearn, 1990). The study shows that the genetic contribution to personality and attitudes is small, around 30%, compared to that for physical health. The highest heritability turned out to be in cognition, accounting for about 80% of variability among older adults in I.Q. Depression and serious late-life cognitive problems like Alzheimer’s disease are quite hereditary too (Pedersen, 1996).

It is difficult is to distinguish inherent processes from pathological changes of cerebral function. Additionally, the functional impact of organic disorders may also be due to the cumulative effects of various adverse environmental conditions. Ulman Lindenberger and Paul Baltes (1996, 1994), put forth the idea that sensory functioning and intelligence might be strongly related in very old individuals aged 70-100 years. They offer two hypotheses as to why these variables might share a powerful relationship during advanced old age. The ‘sensory deprivation hypothesis’ suggests that age-related declines in cognitive functioning reflect the cumulative effects of reduced high-quality sensory stimulation in the oldest-old. It is difficult for very old individuals to maintain their cognitive ability and engage in intellectually stimulating activities if they
cannot see or hear well. The ‘common cause hypothesis’ maintains that
deficits in sensation and intelligence in advanced old age are the end result
of a third (or common) factor — the physiological deterioration of the
brain. It is reasonable to assume that negative brain changes lead to
impoverished cognitive performance i.e. research shows that a great deal
of the age-related deterioration of visual acuity is caused by changes at the
level of the brain, not just the eye.

Baltes and Lindenberger tested 156 older adults who were part of the
Berlin Aging Study, in the ages 70-103 years, on basic intellectual
functions, visual acuity and auditory acuity. It was found that age
correlated with visual and auditory acuity, which in turn, was related to
intelligence. In fact it accounted for 93% of age-related variability in
intellectual task performance. In another study (Baltes & Lindenberger
1996), assessed 680 individuals aged between 25-103 years. It was found
that individual differences in intellectual functioning related to sensory
function increased from 11% in adulthood (25-69 years) to 31% in old age
(70-103). Baltes and Lindenberger (1997) conclude that sensory function
is perhaps a better predictor of intellectual ability than socio-biological
variables like occupation, or years of education.

Social variables are also important. While it is difficult to disentangle
cause and effect, there is increasing evidence that part of the poor cerebral
function of the elderly is due to disengagement from society. There are
good reasons to infer that social environment has an impact on patterns of
cognitive functioning (Krause 1991):

1. Social integration and support have been linked to protection against
physical and mental health outcomes such as heart disease, hypertension
and depression, which are associated with cognitive decline.

2. A growing body of research show direct links between patterns of social
interaction and neuro-endocrine and cardiovascular reactivity. Negative,
non-supportive interactions have been shown to in heightened reactivity,
which in turn, are linked to risks for cognitive decline. Positive supportive
interactions could be hypothesized to protect against cognitive decline
through their association with reduced physiological activity.

3. Social interactions have important intrinsic cognitive components and thus
promote ongoing cognitive engagement; they may also contribute to better
cognitive functioning.

In a study by Bassuk et al. (1999), one examined both structural and
qualitative aspects of social networks in relation to cognitive ageing,
examined levels of social engagement and support as predictors of risk for
cognitive impairment in The Yale Health and Ageing Study, a longitudinal,
population-based cohort study of older adults. Over a 12 year follow up,
greater baseline social engagement (reported contacts with friends and
family and greater engagement in group activities) was shown to be protective against cognitive impairment as measured by the Short Portable Mental Status Questionnaire.

Seeman et al (2001), in their study examined the relationship of social ties and support to patterns of cognitive aging in the MacArthur Studies of Successful Aging. A cohort study of 1,189 initially high-functioning older adults was taken. Baseline and longitudinal data provided information on initial levels as well as changes in cognitive performance over a 7.5 year period. Analysis indicated that participants receiving more emotional support had better baseline performance, as did those who were unmarried and those reporting greater conflict with network members. Greater baseline emotional support was also a significant predictor of better cognitive function at the 7.5 year follow up.

The effects of marital status and living arrangements were also assessed in some studies. Using cross-sectional data from the Health and Retirement Study in U. S., Waite and Hughes (1999) explored the relationship between the living arrangements to physical, cognitive and emotional functioning. It was found married couples showed the highest level of functioning.

Ingles et al (2001) randomly selected out of 10,263 elderly, a sample of 1659 elderly from The Canadian Study of Health and Aging. The sample covered community and institutional dwelling persons aged 65
years or older. They were reassessed after 5 years on a neuropsychological test. Results showed that rates of institutionalization for those with NPD (dementia without otherwise meeting dementia criteria), and CIND (Cognitive impairment but no dementia), were significantly higher than those with no cognitive impairment and moderate-severe dementia.

A study was carried out to assess the role of cognitive status and its role in the quality of life of the elderly (Jamuna & Ramamurti, 2000; Jamuna et al., 1999; Lalitha, 2000). The Mini Mental Status of Examination was adapted to assess the cognitive status of the Indian elderly. Folestein et al. (1975) developed the Mini mental status of examination, as a practical method for grading the cognitive state of patients for the clinicians. Results show a vicious cycle between cognitive status and quality of life.

While these findings do throw light on many wrong assumptions one may have about declining mental efficiency in advanced years, most research findings do report that as one ages, there are declines in mental efficiency. Most gero-psychologists agree on intellectual decline though they disagree as to its cause. Ramamurti and Jamuna (1993), emphasise that global intelligence test scores as not suitable for studying decline. Instead, unidimensional tests are required to explain the decline in intellectual abilities. Research studies have revealed that some abilities are age stable while others show age decline.
Biologically, brain ageing involves structural losses in neurons and synaptic connections along with declines, in various neurotransmitter systems. Explanations for cognitive ageing deficits have also been postulated at various levels. Some assume age-related reduction in information processing resources, such as working memory capacity, attention regulation and processing speed. Others hypothesize age-related increase in neuronal noise or dysfunction of the prefrontal cortex. Shu-Chen (2001) integrates both these assumptions, by a recent integrative theory that links cognitive ageing deficits with deficient neurotransmission causing noisier information processing and less distinctive cortical representation.

On the other hand, many gerontologists feel that there are a variety of 'ages' that exist in the same individual, and that multiple patterns of age-related changes can be identified. Functional age (also referred to as biological age), is used by some gerontologists to represent the ageing process in a meaningful way, as opposed to simply relying on chronological age. Decline in cognitive abilities is thought to reflect degradation of bodily systems due to age-related changes.

In *The Minnesota Twin Study of Adult Development and Ageing (MTSADA)* (Finkel, Whitfield & McGue, 1995), measures of 30 demographic, cognitive, physiological, personality and behavioural
variables were taken from 140 monozygotic and 97 dizygotic twins, aged 27-88 years. Analysis on 3 components of functional age, namely, physiological measures, cognitive abilities and processing speed, was done. Results showed that genetic and environmental factors vary greatly for different components of functional ageing.

Kail and Salthouse (1994) argue that age-related changes in information-processing speed contribute importantly to the decline of all cognitive functions. They argue that processing speed is a basic cognitive resource along with working memory and attention. The generalized slowing hypothesis is a widely accepted theory of normal cognitive ageing that stipulates that age-associated declines in high-level cognition are mediated by reductions in processing speed. Peters, Graf and Hayden (2001), studied a sample of 55 ‘cognitively but not demented’ (CIND) elderly with a mean age of 66 years. They were matched with a group of 42 healthy adults in age and sex, with a mean age of 59 years. Measures of processing speed were checked against measures of cognition. The degree of attenuation in the predictive ability of age, after controlling statistically for processing speed, did not differ significantly between the two groups. Findings suggest that the cognitive deficits of CIND patients can be partially explained by processes that are involved in normal cognitive aging.
Working memory can be viewed as the amount of cognitive resource available to simultaneously store new information and to perform mental operations on either incoming or recently accessed information. Zacks et al. (2000) define working memory as the active processes and structures involved in holding information in mind and simultaneously using that information, sometimes in conjunction with incoming information, to solve a problem, make a decision, or learn new information. Older adults show significantly poorer working memory function. They demonstrated that as much as 60% of age-induced decline in cognitive function can be explained by decrements in processing speed. Processing speed here is a 'cognitive primitive', that maybe a fundamental component of the architecture of human cognition. The origin of this view can be traced to Salthouse's (1980), hypothesis that age-related deficits in working memory are secondary to decrements in processing speed.

Mental or intellectual functioning according to Raymond Cattell and John and Horn, can be divided into 'crystallised intelligence' and 'fluid intelligence'. Crystallized intelligence refers to those abilities most affected by learning, e. g., verbal skills, and vocabulary usage, remains the same and in many instance, continue to improve with age. Fluid intelligence refers to mental abilities that are most affected by the ageing of the nervous system. These would include mental agility and visualizing
an old problem in new ways. As a result, older people exhibit slower mental reactions and are often less adept in processing new information (Baltes & Staudinger, 1993). Much decrease in fluidity has been due to general slowing down of processing speed. Older adults performance on intellectual tasks that require many mental processes to occur in small amounts of time is greatly impaired (Salthouse, 1996).

Lusziz (1992), assessed cognitive functioning, using the CPM and MMSE, in 107 young-old (60-74 years) and 58 old-old (75-92 years) elderly, of whom, 87 were women. Decrements were observed with regard to age on incidental and intentional memory and rate of information processing.

5.7 Age and Education influences on mental efficiency.

Deary and associates (2003) found that Scotland gave its 11 year olds a validated cognitive test in June 1932. This test served as an early-life cognitive ability for these people who at the time of Deary and associates study were in their late 70s. Tracking these persons who had participated in The Scottish Mental Survey of 1932, they tested 83 of them again, and also conducted a brain imaging study. Testing included non-verbal reasoning, memory, learning, processing speed, and executive function. The Magnetic Resonance Imaging (MRI), allowed researchers to assess the extent of white-matter lesions, which are like little scars in the
brain. White matter lesions are like small bright patches that show up on the MRI. They start around the age of 60, among the brain’s message carrying axons. They significantly affect cognitive function in old age. White matter lesions are viewed as a normal part of ageing and are found in people with no dementia or other neuro-cognitive disorders. They may be linked with other health problems like hypertension, diabetes, heart disease and cardiovascular risk factors. Deary et al., found that amount of white matter lesions contributed 14.4% of the variance in cognitive scores, while early I.Q. scores contributed 13.7% of variance. They also found that these two factors are independent and do not affect the scores in the same way.

Context processing is a kind of mental ‘operating system’ that sits between the brain’s prefrontal cortex and cognition. With adequate levels of the chemical messenger dopamine, the prefrontal cortex reliably enables one to process context for a thought, memory or behaviour. The gradual loss of the ability to gather and use contextual clues could explain why older people decline cognitively across a range of functions. In normal ageing, erratic or declining dopamine levels may affect how people process contextual information, which in turn can weaken all cognitive functions that depend on it, like attention, memory and so on. Braver et al., (2001), in a study found the same. 175 young adults (aged
18-29 years), and 81 older adults (aged 65-85 years), undertook a series of trials requiring cognitive control – 'an AX – continuous performance test'. Subjects were to hit a button only if the letter 'X' shown on a computer screen, was followed by 'A' (context). It was found that older adults had impaired context processing and also had fewer false alarms because their impaired processing inhibited them from making a response. Results thus suggest a deficit in the ability to properly represent, maintain and update task-relevant context as the basis for a range of age-related cognitive declines.

Coffey et al. (2001), studied the relations between age-related changes in brain structure and neuropsychological test performance in 320 elderly non-clinical volunteers (66-90 years), were examined using MRI data and measures of attention, information processing speed, language, memory and visual-spatial ability. Findings show a relationship between age-related changes in brain structure and age-related decline in attention, psychomotor speed and visual delayed memory.

Casarotti et al (2001) investigated the cognitive and functional capacities of centenarians. They chose 2 groups of subjects, 89 community living healthy old elderly, aged 72 to 92 years, and 48 nursing home elderly aged 100-107 years. Four measures were taken, cognitive performances (MMSE), functional state (ADL), behaviour (GDS) and
comorbility (CIRS). Results indicated that age correlated significantly and negatively with MMSE scores and ADL evaluations but it correlated positively with CIRS severity.

In another study, Suutama and Ruopilla (2001) assessed the cognitive functioning of Finnish older persons, ranging from 75 to 85 years. They were given various psychometric tests. On a follow up study it was found that cognitive functioning of older persons deteriorates significantly with increasing age.

Other than age, years of formal education, also influenced declining mental ability. The educational differences between older people having fewer years of schooling than younger adults were especially great in the 1950s and 1960s. It was around this time, that psychologists found that intelligence steadily declined beginning in young adulthood. Ishizak, Meguro et al. (1998), administered the MMSE to 2266 elderly aged 65 years over in a town in northern Japan. They found no effect of sex on the MMSE scores, but the scores significantly declined with age and lower educational level.

Wilson et al. (1999) investigated cognitive activity in older persons aged 65 years and over. 6612 subjects were given cognitive performance tests and interviewed about participation in common cognitive activities. Frequent participation in cognitive activities was associated with age,
more education, higher income, female gender. However, the more cognitively intense activities were more associated with education, male gender and family income. Here education is a factor that stood out with regard to cognitive activity.

Ponzetto et al. (2001) evaluated cognitive status among 1745 elderly patients at a University Geriatric Ward, in Italy. Sample was divided by age and by level of cognitive impairment. They found that older patients (aged 80 years and over) were moderate or severe cognitively impaired. In addition, they found that moderate-severe cognitive impairment was prevalent among those who did just primary school.

Albala et al. (2001) took a random and representative sample of 1306 subjects aged 60 years and over, living in the city of Santiago, Chile. Two tests of MMSE and Pffefer Activities Questionnaire (PFAQ), were given. Cognitive impairment was assumed if MMSE score was below 13, and above 5 in PFAQ. They found that all the items of MMSE were affected by age, not gender. However, the interaction between gender and age resulted in a higher prevalence in women. Cognitive impairment was significantly higher in less educated subjects. Prevalence of cognitive impairment was 9% in the sample, among the older and less educated subjects.
Bornstein and Suga (1988) examined performance on a battery of neuropsychological tests including the Halstead-Reitan Neuropsychological test battery, in 134 normal (55-70 years), who were stratified on the basis of education level. Findings indicate that subjects with more education (more than 12 years), performed significantly better.

Anathalakshmi, Vanaji and Bhogle (1986) studied the intellectual decline among educated elderly. Intellectual decline was studied using 80% offspring pairs in the ages 30-70 years. Performance part of the WAIS was given to 160 subjects. The parent offspring pair was selected for a kind of control on genetic and environmental factors influencing intellectual abilities. In addition to age, aspects of education, exposure to stimulating environment, mental activity and awareness of old age, were studied. They found that there was more rapid decline among the aged who have less education, less exposure to environment, less mental activity and greater awareness of the decline with age.

Kohli, Banerji, Verma and Nehra (1992), assesses the mental efficiency of old depressed subjects on various cognitive tasks. A sample of 50 elderly depressives (aged 55 years and above), was administered a battery of psychological tests (Set 10, Special 10, Nahor and Benson Scale and Geriatric Depression Scale). These subjects differed significantly from normal old subjects on the Geriatric Depression Scale, Set Ten and Special
Ten. Results reveal that elderly depressives expressed more cognitive and affective distance along with lower mental efficiency, general orientation, memory, and general information level. The differences were insignificant on the Nahor and Benson scale suggesting that depressed elderly patients do not suffer from greater perceptuo-motor disturbances than their normal counterparts.

Suutama and Ruoppila (2001), studied the cognitive functioning of Finnish older persons aged 75 years, over a 10 year period. 300 persons (66% being women), aged 75 participated in the Evergreen Project in 1989, 190 of them took part in the 5 year follow up, and 99 (70% being women), in the 10 year follow up. They found that cognitive functioning of older persons deteriorates significantly with increasing age.

5.8 Memory

As one grows older, one's brain deteriorates and as a result, one's memory starts failing as a result of 'normal' degenerative change. This sort of decline is termed as 'age associated Memory Decline'. Certain other disease conditions of the brain also can induce a pathological decline in memory. In studies on memory this distinction is always made between normal and pathological memory loss (Lalitha, 2000). One approach to
understanding why memory deficits occur in old age may be traced to the
deterioration of the brain i.e., structural changes at the neuronal level,
diminishing concentrations of neurotransmitters. These along with cell
death and atrophy are throughout the brain but very prominent in the
frontal lobe.

Using PET methodology, Schacter et al. (1996), found that blood
flow increased to frontal lobes when individuals tried to search for a
memory and it increased to the hippocampus when a memory was actually
recollected. It was found that for older adults less activation of frontal
cortex was apparent during search for a memory. Age differences in
memory are found where strategic retrieval is called for, which is caused
by age declines in frontal cortex. Non-declarative memory however, does
not exhibit age-related declines as mental processes for these are located
in the posterior cortical regions which are largely unaffected by the ageing
process (Schacter, 1996).

Read (1987) identified three memory problems can occur:-

i) lack of attention to or a difficulty in understanding what had
   happened – an encoding deficit.

ii) a failure to store the event or

iii) difficulty retrieving events already stored in memory.
It is important to differentiate normal memory loss from that caused by dementias. The non-pathological loss of memory in the normal elderly has been labeled as 'benign senescent forgetfulness' (Kral, 1962). This type of memory impairment is benign because it does not interfere with a person's ability to function in everyday life. Memory deficits can be of two types further: 1) apparent memory deficits: resulting from the use of ineffective encoding and retrieval strategies. 2) Genuine memory deficits: memory problems that persist even after individuals have carried out effective encoding and retrieval activities. These deficits are irreversible.

Biological changes in the hippocampus that accompany normal ageing, maybe responsible in part, for declining memory abilities of older animals and adults (Moscovitch & Winocur, 1992).

Salthouse and colleagues (1991, Verhaeghen & Salthouse, 1997) believe that working memory is the key to understanding age differences in memory. Working memory can be viewed as the amount of cognitive resource available to simultaneously store new information and to perform mental operations on either incoming or recently accessed information. Older adults show significantly poorer working memory function.

Some studies link memory and other mental processes. Inagaki et al., (2001), studied the cognitive function of the Japanese centenarians. They grouped 207 elderly aged 65 to 105 years, by age. The age groups were
65-74 years (24 young-old elderly), ages 75-89 (18 old-old elderly) and ages 100-103 (16 centenarians). Results showed that only recall score of centenarians was lower significantly than young-old. On other functions like listening, repeating, reading, writing etc., there were no significant differences. Memory declined with ageing but the executive function was maintained.

In the Tirupati Centenarian study, it was found that most of the centenarians had a fairly good memory and were cognitively intact for their age. They could clearly recall most of the things that took place early in their lives. Age associated memory decline was noticed among 21% of the centenarians. But for their sensory impairment, the comprehension of longevous persons was generally good (Ramamurti, Jamuna & Rani, 1996)

A new concept, centering on the idea that memory and cognitive power does not necessarily decline with age, is gaining momentum with the study results by a team of Princeton University psychologists. They found that adults continue to grow new brain cells throughout life. Those late-generated cells, they found, may allow older people to bolster their learning and memory capabilities, or even stave off declines. Such capabilities were never envisioned under the old theory that cells stopped forming and actually started dying by age 40 (Volz, 2000). But there is no
denying that age is an important predictor of performance in the facets of working memory and verbal memory.

It is interesting to note that education rather than age plays an important role in the performance in various facets of memory. In a study of older persons in the Indian context the sample had a significant variation with regard to levels of education. Some had no formal but only a little functional education; others had formal schooling of various levels. Further, at the period when these were young and of school going age, few facilities were available to these persons to benefit from formal schooling. Also the training and techniques of recent times were totally unavailable to these individuals at their young age. These variations have significantly contributed to the performance in various sub facets of memory. Education facilitates the person to use memory strategies spontaneously and can readily use certain cues to recall (Lalitha, 2000).

Compared to the Indian samples the western samples differ in terms of social, cultural, educational, economic and other contextual conditions. Therefore, these differences are to be borne in mind while interpreting the age trends in memory of the elderly in India (Lalitha, 2000). Keeping this in mind, Isaacs and Aktar (1972) developed ‘The Set Test’ to measure the mental functions of the normal elderly that is not dependent on the cultural and educational background.
5.9 Depression

Women tend to be diagnosed as being depressed more often than men (Gatz et al., 1996). This has led some researchers to focus specifically on women's experience of depression to identify the kinds of symptoms they have.

Newman, Engel and Jensen (1991) found two different depressive syndromes and four different but related forms of psychological distress. The two depressive syndromes differ on whether two key symptoms are present: dysphoria and feelings of guilt or self-blame. They are present in classic clinical depression but appear to be absent in a version of depression that at one time was called masked depression but is now called the 'depletion syndrome of the elderly' (Kasl-Godley et al., 1999). Interestingly four limited forms of psychological distress were found, each independent of the others: sleep disturbances, loss of energy, loneliness and self-deprecating attitude.

Chou and Chi (2001), studied 411 older adults, average age being 71.1 years in Hong Kong were taken. The respondents completed surveys on five domains of life: physical health, mental health, finance, social network, marriage/close relationship. It was found that social support moderates the influence of the exposure to the stress life events on depression.
Sheoran, Vermani and Darshan (2002), found multiple psychological problems among their sample of 150 aged widows from three villages in Haryana. Inspite of having an adjustment problem at home, majority of the aged widows still preferred to live among their own family members. Depression was evident among 60% of them, and those who became widows after 50 years of marriage and those aged 70 years and above were more depressed than the rest.

Rai (1972) conducted a study on 400 elderly persons aged 60 years and over. It was found that family structure and 'living alone' in old age is a cause for depression. It was also observed that 80% of those in nuclear families preferred to be living in a joint family for both emotional and economic reasons.

Sharma, Satija and Nathawat (1985), took a sample of 50 subjects from the Psychiatric Centre, Jaipur, along with 50 normal controls. They were subjected to different psychological scales. As regards the marital status, widowed were more in depression group (30), as compared to the control group (8). Blazer et al. (1991), studied 3998 community-dwelling elders, aged 65 years and over, at Duke. Depressive symptoms were associated with increasing age, being female, social support and lower income. Mathur and Sen (1989), studied by way of free verbatim, the lives of 70 elderly, aged 65 years over. They found that those whose
spouses were dead showed more depressive symptoms than those whose spouses were alive.

Koropeckyj-Cox (1998), examined whether childlessness is significantly related to greater loneliness or depression among older adults, both among those who are alone and in conjunction with marital status. Using data from the 1988 U. S. National Survey of Families and Households, she covered persons aged 50-84 years. Widowed men and women report higher levels of loneliness and depression than married, regardless of parental status.

Morgan (1987) used four assessment scales including the life satisfaction index to generate profiles of mental health and psychological well being for 507 aged and 535 very aged subjects. The aged subjects portrayed higher depression and lower morale.

In a study of anxiety, depression and emotions among senior citizens (Bhat et al., 1998). It was found that among senior citizens, both males and females without spouses showed high depression, than those with spouses on the Geriatric Depression Scale.

Sharma and associates (1985) assessed a sample of 50 elderly citizens from the psychiatric centre in Jaipur. These were compared to 50 normal controls. They were subjected to different psychological scales. It
was found that financial problems often accompanied depression. However, further with regard to marital status, widowed elderly were more depressed than the rest.

Shyam, Yadav et al (2000) compared 30 institutionalised and 30 non-institutionalised elderly with regard to their well being, social support and health. It was found that institutionalized elderly reported significantly high depression.

Chi and Chou (2001), surveyed, a community sample of 1106 elderly aged 60 to 95 years in Hong Kong. Results show significant relationships between depression and all dimensions of social support. Social support from family was important, and satisfaction with support was a more important predictor of depression levels than other objective measures of network relationships.

Depression as a psychological factor also affects one's mental efficiency. Using the Battery for assessing mental efficiency, Kohli et al. (1992), tested depressive elderly aged 55 years and above. They found that the sample showed higher depression scores, and also low mental efficiency, general orientation, memory and general information level than normal aged.