CHAPTER VI
SUMMARY AND CONCLUSION

Aging refers to irreversible biological changes that occur in all living beings with the passage of time, eventually resulting in death. Aging process involves a slow decline in physiological vigor and an increasing susceptibility to age-related disease. Old age in general is associated with multi dimensional problems. Increasing longevity and life expectancy, urbanization expansion, development in people’s life and behavioral pattern and the rise of modern medicine has resulted in an increased ageing population and therefore there is an increase in non-communicable diseases in both developed countries and developing countries. Chronic diseases disproportionately affect older adults and are associated with disability, diminished Quality of life (QoL), and increased costs for health care and long term care. Health and QoL of the elderly is one of the prime areas that need special care and attention at present.

6.1 Summary

The present study titled “The prevalence of geriatric diseases and quality of life of elderly” was conducted with the following objectives:

1. To study the prevalence of geriatrics diseases among the selected group of elderly persons living in homes and institutions.

2. To assess and compare geriatric illness and quality of life of elderly people living in homes and institutions.

3. To compare the quality of life on WHO-QoL of elderly in the two age groups of men and women living in institutional and
non-institutional settings in the five broad dominions of quality of life.

a. Physical health

b. Psychological

c. Level of Independence

d. Social Relationship

e. Environment and overall perception of QoL

4. To compare to prevalence of geriatric diseases and quality of life of men and women.

5. To compare the geriatric illness and quality of life between the two age groups of elderly, i.e., 65 to 70 and 71 to 76 years.

6. To study the association between the QoL of elderly and demographic variables namely marital status, education, number of children.

7. To compare the health-related QoL based on SIS of elderly in the two age groups of men and women living in institutional and non-institutional settings on the following dimension.

a. Physical functioning

b. Psychological and emotional functioning

c. Social functioning

d. Food and Nutrition

e. Diet Patterns

f. Health Care and Habits

8. To develop a package of educational programs suitable for the aged persons to improve their health and quality of life.
9. To study the impact of the educational program on the overall perception of quality of life and health of the experimental group of elderly living in homes.

**Research Procedure**

Purposive random sampling technique was used to select the sample from urban Bangalore District. Two phase sampling design was adopted for the study. For the first phase of the study the total sample constituted 800 elderly between the age group of 65 to 76 years living in residences and old age homes. A total of 400 elderly living in residences and 400 living in old age homes of which were 200 men and 200 women and they were further divided into two age group 65-70 years and 71-76 years consisting of 100 each selected from twenty areas and twenty old age homes in urban Bangalore.

The tool used for gathering data on the perception of health and QoL included a Structured Interview Schedule (SIS) on demographic profile and on health related quality of life (HR-QoL) developed by the researcher and standardized scale on QoL developed by WHO-100-QoL.

A pilot study was conducted to determine the feasibility of the study. The study was undertaken to evaluate the SIS developed on HR-QoL. The scale was administered on ten percent of the sample equal to main study.

A list of old age homes was collected from Social Welfare Department, Government of Karnataka. The samples were collected from visiting 20 old age homes where there were more elderly between the age group of 65-76 years and administered both the scales after obtaining permission from the administrators of the institutions fixing the convenient day and time. The data collected from elderly living in
homes visiting various mahila mandals, parks, clubs, and senior citizens sanghas from 20 areas of urban Bangalore.

The main objective of the study was also to develop a module of educational programme for elderly in order to impart awareness and management of geriatrics diseases and ways to improve their health and QoL. Vidyaranyapuara area was selected randomly and a letter was sent to the respondents and their willingness to attend the program was sought. Respondents who gave their consent to attend the programme were considered as experimental group which constituted 80 of which 40 were men and 40 were women. They were subjected to a planned module of educational programme which consisted of 24 sessions conducted at the centrally located hall at Vidyaranyapura for weekly two days of 2 hrs duration for a session period of three months.

The educational programme covered on different areas such as active and healthy ageing, importance of physical activity, recreation and leisure time activities, basic food groups and balanced diet, nutrition in old age, diabetes in old Age, cardio vascular diseases (CVD), hypertension, cancer , arthritis and osteoporosis, gastroenteritis, mental health in old age, psychiatric disorder in old age, health care to improve quality of life, fall related injuries in old age, breathing problem in old age, home remedies for old age diseases, acupressure, stress management for elderly and importance of humor and laughter yoga.

Each session was conducted with a specific objective, concepts were described and various audio visual aids used and expert in the field were also invited to give a lecture to enhance the participation of respondents and to make them attend regularly.
The impact of the educational programme was assessed through pre – post design using the same scales for assessment with an interval of one month between intervention and reassessment.

**Analysis of Results**

For the purpose of analysis, the data obtained from the respondents were quantitatively assessed in the form of scores. The scores for pre test and post test sessions were compared. Analyzing the data included techniques of percentage analysis, mean, standard deviation, chi-square, ‘t’ test and ‘Z’ test.

In order to test the homogeneity of the sample with regard to other demographic variables, the sample distributions on marital status of respondents, their educational status, and number of children in the family within the sub groups were compared.

Analysis was carried out to study the impact of intervention programme. The effect of intervention on men and women respondents and on the two age groups of respondents was tested by using the ‘t’ test between pre and post intervention assessment.

**Prevalence of Geriatric Diseases**

With regard to the prevalence of diseases the results revealed that majority of respondents reported hypertension (67 per cent) and diabetes (58.4 per cent). Respondents suffered from other diseases like osteoporosis (17.5 per cent) followed by cardio vascular diseases (15.6 per cent) and gastro intestinal disease (16.1). Some of them were suffering from respiratory problem, cancer and psychiatric disorder; only few respondents (15.3 per cent) were not suffering from any diseases and reported to be healthy.
When institutional and non-institutional settings were compared, the institutional group of respondents more often reported the condition of hypertension, diabetes mellitus, osteoporosis, cardiovascular disease and other diseases. The non-institutional group reported more often gastro intestinal disease and also no diseases condition. More number of women reported osteoporosis and cardiovascular diseases. No disease condition was reported more by men.

In the age group of 71 – 76 years, more number of respondents reported cardio vascular disease as compared to the age group of 65 – 70 years. No difference was noticed with regard to other diseases.

**Perception of Quality of Life**

A comparison of the pre test performance of elderly living in institution and non-institutional settings showed that respondents living in institutional setting have reported high level of QoL in more numbers as compared to non-institutional setting.

**Influences of Demographic Variables on the SIS Health Related Quality of Life (HR-QoL)**

With regard to the association between demographic variables and the variables on SIS HR-QoL which included the areas physical activities, psychological and emotional functioning, social activity, aspect of nutrition, health care and habits, Chi square analyses were done.

The analysis of pre test assessment revealed the following findings.

Gender difference was not a contributing factor in determining the physical activity of respondents. While Walking and Climbing were reported more often in the Institutional setting, shopping, cooking and
cleaning along with driving in case of men were more often reported in the non institutional setting.

The respondents in the institutional setting as compared to the non institutional setting reported more often the emotional states of anxiety, depression, tension, irritation, fear, inferiority, frustration, feeling of sadness and insecurity. In the non institutional setting, respondents expressed anger more often and also they experienced love and affection more often.

Relatively, men in the institutional setting showed more fear compared to women and women in the non institutional setting show more fear compared to men. Among women there was no association between setting and fear.

Men respondents reported ‘worry’ more often than female respondents in the institutional setting. Whereas, in the non-institutional setting not much of a variation was noticed between men and women. Worry in general was felt more in the institutional setting. In the non institutional setting, more often, both men and women have reported satisfaction, sense of freedom, feeling of independence, self confidence, better memory, better concentration, ability to take decision and ability to manage by themselves. In this setting majority of them never felt lonely. Dependency was shown more often both by men and women in the institutional setting. Confusion was less in the non institutional setting for both men and women. Psychological and emotional functioning is not significantly associated with the sex of the respondent.

Social activities were found more in the institutional setting. While men in institutions either visit parks always or occasionally, women visit parks always in the institutional setting. Women in non-institutional setting prefer ‘never’ to visit parks. While women were not
involved in other social activities, men were more often involved in these activities.

Respondents in institutional setting eat well cooked and hygienic food than respondents in non institutions. Whereas, respondents of non- institutional setting eat food according to the diet plan by doctors, drink plenty of water, avoid eating heavy meals and eat salads more often than respondents in institutions. Taking food at regular timings was also noticed more among respondents in non institutions. They also avoid more often eating under cooked meat and non vegetarian food. The gender differences noticed were statistically not significant.

The institutional setting facilitated respondents to participate more often in general health check up, weight check, regular exercise, to take medicine on their own and to go for regular lab tests prescribed by physician. But they were also more prone to decide on what medicine to take on their own or on the advice of their friends and to stop taking medicine when the health improved. These respondents occasionally try home remedies. However, in the non- institutional setting, respondents took medicine regularly and took medicine after consulting a doctor.

_Differences in Gender and Age on Perception of Quality of Life_

The findings reveled that gender differences are associated with the perception of QoL of respondents was found to be true in the case of respondents in institutions, but not in the case of respondents from non- institutions.

In the institutional setting the 71-76 year old group of men showed better QoL where as in non- institutional setting 65-70 year old group of men showed better QoL.
There was an association between the setting and quality of life for both men and women in the two age groups. For both men and women in the two age groups the perceived QoL was better in the Institutional setting as compared to the non-institutional setting.

More number of respondents in the age group 65-70 years reported a high level of quality of life as compared to the 71-76 years age group. Low level of QOL was reported more often in the age group of 71-76 years as compared to the age group of 65-70 years. In non-institutional setting, the three level of quality of life showed no association with age. None of the respondent from the non-institutional setting obtained a high score on QoL.

The respondents in the age group of 65 -70 years in the institutional setting showed a higher score on all the domains as compared to the respondents in the non-institutional setting. This was not applicable to the other age group.

Both men and women showed a higher mean score in the Institutional setting as compared to the non-institutional setting. Only for respondents in the institutional setting the perception of QoL of men was better than that of women.

For both men and women the scores in different areas of QoL were more in the institutional setting as compared to the non-institutional setting.

**Association between Demographic Characteristic and Quality of Life of Respondents**

The analysis of results revealed that in institutional settings there is an association between three levels of quality of life and marital status.. Married respondents report a higher level of QOL as compared to widow/ers. Even in non-institutional setting married
respondents report a moderate level of QOL as compared to widow/ers.

In both Institutional and non-institutional setting, educational level of respondents was found to be significantly associated with the QoL. But the direction of association appears to be different. In the Institutional setting a high QoL was reported when the educational level was lower and the QoL was low when the education level was higher. In the non-institutional setting respondents with lower education more often showed a low QoL and respondents with higher education more often showed a moderate QoL.

In institutional setting, the percentage of respondents reporting the QOL to be high increased as the number of children increased. A lesser percentage of people reported the QOL as low or moderate with an increase in the number of children. In the non-institutional setting there does not exist an association between three levels of quality of life and number of children.

**Association between Geriatric Diseases and QoL of respondents**

The finding revealed that in the institutional setting respondents with geriatric diseases or other diseases have reported a higher QOL as compared to respondents with no diseases. However, in non-institutional setting there is no association between three levels of quality of life and diseases.

Respondents suffering hypertension are comparatively more in the non-institutional settings when the QOL is at low or moderate level, in both age groups, whereas, in the institutional setting more cases of hypertension was noticed with high quality of life. There is an association between hypertension and quality of life only in the institutional setting. However, what is noticed is opposite to the
expectation, since the number of cases of hypertension is more when the quality of life is high.

Respondents suffering Diabetes mellitus (DM) are comparatively more in the non-institutional settings when the QoL is at low or moderate level, in both age groups, whereas, in the institutional setting more cases of DM was noticed with high quality of life.

There is an association between diabetes mellitus and quality of life only in the institutional setting. However, what is noticed is opposite to the expectation, since the number of cases of DM is more when the quality of life is high.

The variations in the number of respondents suffering osteoporosis under the three level of quality of life showed an association between the two only for women respondents in the 65-70 years group in the non-institutional settings. More number of women in this group with osteoporosis reported a low QoL. Whereas the three level of quality of life showed no association with osteoporosis for the remaining groups.

The variation in number of cardio vascular respondents under the three level of quality of life reveals an association between the quality of life and cardio vascular disease only in the case of women respondents in institutional setting in both the age groups of 65-70 years and 71-76 years. This association does not exist for respondents in non institutional setting and for men in institutions. Proportionately more number of women with Cardio vascular disease reported a high QoL

In the age group 71 -75 years, in both the settings proportionately more number of men with gastro intestinal disease reported a moderate/high QoL. Whereas, no association between
number of gastro intestinal disease respondents and the three level of quality of life was noticed for women respondents in both the settings and in both the age group. This was true of men in the age group of 65-70-years.

The variation in number of respondents with other disease showed an association with the three level of quality of life only in the case of men respondents living in institutional settings in the age group of 71-76 years. In this group proportionately more number of respondents with other diseases has reported high/moderate level of QoL. Whereas, in other groups of respondents, no significant association were noticed between the three levels of quality of life and other diseases.

An association between absence of disease and QOL was noticed in three groups. Institutional women in the age group of 65-70 years, and both men and women in institutions in the age group of 71-76 years showed an association with significant chi-square values. Contrary to the expectation, even here, low QOL is associated with without disease condition.

**Impact of Intervention Program on Health and Perception of Quality of Life of Respondents**

It was hypothesized that the scores of experimental group will be significantly more during the post test as compared to pre test with reference to health and QoL.

The post test assessment to evaluate the impact of the educational programme showed significant differences in the mean scores of the experimental group of respondent. The results showed the impact of educational programme on the overall perception of QoL accepting the hypothesis set for the study.
The gain in scores was found both among men and women respondents. When both the age groups of respondents were compared, the enhancement was found to be little more among 65-70 years age group of respondents than the 71-76 years age group of respondents. However, the impact of educational programme on overall perception of QoL was found among both age groups.

When the pre and post test scores of the respondents on the various domains of QoL was compared, the results showed an impact of intervention program on respondents with significant improvement with regard to all the domains of quality of life.

An increase in scores on all the dimensions assessed on SIS was noticed due to the educational program in the experimental group of elderly. Significant improvement in scores on different dimensions assessed through SIS was noticed among both men and women. Men and women differ in the extent of improvement due to educational program only in the case of physical activities, emotional states and health care habits, where men showed greater improvement.

The extent of improvement shown by the two age groups differ significantly on Physical activities, Psychological and Emotional functioning, Social activities, Food and nutrition, healthcare habits and Diet patterns. In all these areas, the 71 -76 year group showed a greater improvement with intervention. One exception is Emotional states where a similar level of improvement was noticed in both groups.

The results proved the hypothesis and the efficacy of the educational programme rendered to the experimental group in improving their overall perception of QoL.
6.2 Conclusion

Advancing age seems to bring meaningless misery mainly because the elderly have been neglected by the modern society. Ageing may be viewed as a biological process, psychological and social development process of individuals including transition in social position, roles, status etc. Old age homes are growing like mushrooms in India and many elderly people prefer to stay in the institution because they are neglected in their family. This makes it necessary to look into the various aspects of their problems, social, psychological, health and QoL. Older people usually suffer from chronic conditions and geriatric ailments are prevalent among the elderly. Majority of them had in order hypertension, diabetes mellitus, osteoporosis followed by cardio vascular diseases, gastro intestinal disease, some of them were suffering respiratory problem, cancer and psychiatric disorder. Most often elderly suffer from multiple chronic conditions. Only few of the elderly were not suffering from any diseases.

Majority of elderly living in institution had high level of QoL than elderly living in non-institutional setting. The differences in WHO-QoL with regard to overall perception of QoL was found between men and women respondents living in institution and non-institutional setting accepting the hypothesis set for the study. There is a significant difference between the institutional and non-institutional men and women respondents in the 5 areas viz., physical, psychological, level of independence, social relationship and environment of QoL.

The hypothesis that there will be significant differences in QoL of respondents in the Institution and non-institutional settings on five domains of QoL at two age level was accepted only in the 65-70 years age group. But with the age group 71-76 years the hypothesis was rejected.
In the present study, the researcher developed a package of educational programme to bring in awareness and management of geriatric diseases and ways to improve QoL and the program was tried on an experimental group of respondents.

The impact of educational program was shown on the overall level of perception of QoL and on all the five domains of QoL in both men and women respondents as per the hypothesis set for study.

6.3 Implications of the Study

Old age is usually a period of declining physical health. The decaling in physical health is due to advancement of age. It is a well-known phenomenon that the physical health of aged people shows great decline in later years of life as compared to early stages. Along with some chronic physical health problems usually the aged also experience organ or multi organs dysfunction, disorder or failure. Though a large number of studies on geriatric diseases and QoL are available in western countries not much data has been generated as applied to the Indian situation.

The medical advancement has increased life expectancy, but has not been able to prevent diseases and disabilities in old age. The diseases like hypertension and diabetes, if unattended can lead to cerebra-vascular Diseases (CVD). CVD can lead to temporary or permanent loco motor and cognitive disabilities. Similarly, diabetes and arthritis can affect the person’s extremities and lead to loco motor disabilities and in turn affect the QoL of elderly.

The study provides insight into the areas related to the geriatric diseases and for betterment of QoL.

The improvement due to educational program is this study indicates that such programs based on the needs of elderly with
regard to geriatric diseases can lead to the elderly knowing more about the diseases. This in turn can be useful to manage well or prevent the effects of diseases. The Program helped the senior citizens to know about various diseases and their management and helped them for a betterment of their overall QoL.

On an experimental basis a smaller group of people were educated with regard to various geriatric diseases and ways to improve QoL. Module can be used for a larger sector of the elderly population which will help them in the management of the diseases and to improve the QoL.

6.4 Recommendation and strategies to be adopted

Considering the apparent increase in the elderly population, more strategies need to be developed to focus on and to promote a better QoL. The module of educational programme would encompass all the geriatric diseases and the management of the diseases or prevention and ways to improve their QoL.

- Health services for elderly at the hospitals should be given at discount rates.
- Organize lectures, seminars on health related topics to increase the awareness and on management of various chronic diseases in hospitals at least once a month.
- Insurances coverage should be given to elderly, i.e., 65 and above age group.
- The services of government, private and various voluntary organizations may be utilized in educating them.
- Health awareness programme only for the elderly may be telecast on T.V channels and their feedback may be considered.

The WHO has used the term ‘Active Ageing’ to express the process for achieving this vision. Active ageing should aim at health,
life expectancy and QoL for all. Involving older people who are retired from work and those who are suffering from illness and disabilities to remain active in their life should be encouraged. Enlightening the old age people with regard to active and healthy ageing is essential.

Providing telephone counseling, using motivational interviewing from specialists in the field will help elderly.

- Distribution of booklets to the young generation on how to take care of the elderly population.
- Elderly the populations are at risk of insufficient activity. Therefore effective infrastructure is essential to increase physical activity and participation of the elderly.
- Health care delivery staff must be equipped in hospitals and give proper health care counseling to elderly.
- Geriatric care at the hospital should be strengthened.
- Depression of the older people may not receive treatment. Community based strategies to effectively screen and treat older people should be more widely disseminated.
- Priorities based grant should be released from the government for healthy ageing program designed to provide a comprehensive approach to help the older live longer, with high quality and independent lives and for programs like injury prevention, disability prevention and management of the diseases.
- Promote health and preserve health related QoL for older adults within health care and other systems.
- Expand efforts to integrate public health and aging services and enhance outreach for health promotion and disease prevention for older adults.
- State and local health department, the ageing services network and other groups that serve older adults should provide scientific and progressive exposure to improve their QoL.