CHAPTER THREE

RESEARCH METHODOLOGY

3.0.0 INTRODUCTION

Research is the process of arriving at dependable solutions to the problem at hand through planned and systematic collection, analysis and interpretation of data (Mouly, 1964).¹ The techniques adopted in a research study are manifested in the methods adopted for investigation and resolution of the issues involved. Therefore, the validity and usefulness of a research study depends largely on the techniques. Methodology can be defined as the principle of organized investigation, with definite norms by means of which procedures and techniques are selected and articulated.

Research methodology is a way to solve the research problem systematically. Diverse methods and procedures have to be developed for a study to aid in the acquisition of certain sources of data, based on the acquisitions of the learned and in the form that can be most efficiently used (Best and Khan 2005).² The methodology adopted in this study has been discussed briefly in this chapter. It is meant to cover the profile of the area where the study was conducted, the aims and objectives of the study, the various definitions, and information on research design, sampling method, criteria for inclusion/exclusion and the tools of data collection. Besides, it makes a peep into the pilot study and

expatiates on the methodology of data collection and plan for the analysis.

3.1.0 Statement of the Problem

Sir James Sterling Ross puts the entire issue briefly: “You do not heal old age, you protect it, you promote it, and you extend it”. Most of the aged people are obsessed with a feeling of isolation and are ignorant of the fact that successful ageing is enhanced by the ability to cope with the changes accompanying old age (Joan, 1993).³

A survey conducted nationwide (National Sample Survey, 1986-87) found that 14.2 percent of the rural elderly were financially independent as against 28.94 percent of their urban counterparts. Only 23 percent of men and 4 percent of women received pensional benefits in Kerala. The number of women pensioners was the highest in Tamil Nadu.⁴

(Jamuna, 1998) reported that more than half of the elderly live in poverty, are dependent and have no independent income.⁵ More than 80 percent of the elderly, who spent their early years in crude days of the bygone era, were found to be poorly educated and unskilled. In rural areas, most of the elderly had income solely from agricultural labour. The phenomenon of out migration is growing, leaving the elderly at the mercy of the fate. The well-being of the elderly is largely dependent on to their educational status.

The steady rise in the number of ageing population all over the world has caught the attention of various international organizations. It is being realized that old age can no longer be ignored. Ageing in itself is not a health hazard. However, we need to learn more about the process of ageing and the impact of culture and environment on it. It becomes apparent that the right preparation, attitude, attention and meaningful involvement can ensure a full, thoroughly rewarding, maturation process. (Ellison, 1979).  

For older individuals, a great proportion of the disease burden derives from existing conditions, and this burden can be assessed through a study of disease prevalence rates, indicators of morbidity, disability, mortality or health and long term care utilization. (Park, 2011). Actual problems of aged people are ill health, retirement and resultant decrease in income may create feelings of helplessness, futility and incarceration, which will continue to canker life increasingly throughout fall in physical capabilities, failing health and invalidism, isolation and loneliness, undue worry over the meaning of life and death.

Social changes are taking place at a faster rate than they were some years ago. Today all the developed countries have undertaken various social legislation and reformative, welfare measures to protect the interests of old people. Old age homes spring up in large numbers. The physical protection, medical aid, and economic security if the aged are being accepted as the responsibility of the community or the State since old people are often deserted by their own children. Old age calls for safeguards against accidents, infections and disabilities. The older people fall

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6 Ellison, (1979) Ageing a blessing or a curse; world views.
easy preys to many physical and psychological problems. One feels isolated and to be a liability to many others and even doubts God’s Love and worries inordinately about death and life after death (Stephens, 2001).  

The demographic picture of every country keeps changing rapidly and constantly. There is a visible demographic shift in India with a higher rate of increase in the elderly population than in the general population, which has its adverse impact on productivity, consumption, savings, health care, infrastructure and pattern of public welfare service, etc. This increase in number poses newer problems in the field of health care, especially an account of the spurt in life style related diseases like cancers, accidents, cardiovascular diseases, coronary artery diseases, malnutrition, depression, etc. (Bhatia, 1999).

The greatest antagonist of the aged is undoubtedly is dementia. Dementia is a syndrome, a cluster of signs and symptoms with myriads of possible causes. It is a complex and a complicated malady, manifested in the form of impairment of intelligence, memory, judgement and personality. Dementia disorders are the most common cause of psychopathology in the elderly. About 15 percent of persons above 65 years of age are demented. This ratio increases incessantly with further ageing. In India a rough estimate of those suffering from dementia at present approximates 4 percent of the elderly population, past 60. This means that more than a million elderly people in India now have dementia. By 2020, nearly 7.5 million Indians above the age of 60 will be victims of this terrible condition. It is commonly held that

caring for an elderly person, who is mentally ill, is far more of an emotional drain than caring for a person with physical disabilities. As in many chronic patients, the patients having dementia cannot be considered in isolation from his/her family.

The problems of the elderly as remarked by (Sarala and Kusuma, 2003) begin with the fast changing Indian scenario, which sounds the death-knell of the conventional joint family system, dislocates all cultural and familial bonds. Failure on the part of the sons to look after the aged is a serious lapse and lack of employment and of income add to their financial backwardness of the aged. The main problem with the elderly in India is poverty as the majority of the older people are struggling for existence. The Chronic Poverty Research Centre has identified the elderly as one of the groups that are most vulnerable to chronic poverty (Rajan, 2004).

According to (Leibing et al. 2003), inadequate financial resources are the major problems of the Indian elderly in general and this seems to be of a higher degree among the female elderly compared to their male counterparts.

The elderly, having no substantial assets nor a good source of income and who are economically dependents, find the attitude and behaviour of the other family members quite painful (Rajan et al.1999). Other related psychosocial problems of elderly such as loss of prestige and status, alienation and loneliness, neglect and

lack of attention and care, alcoholism and disengagement among the aged also deserve special attention. Further disadvantaged sections of the aged such as the disabled aged, aged women destitute, aged landless laboures, chronically sick-aged, the homeless street aged, particularly call for immediate attention of the planners and policy makers (Sudhir, 1998).

3.2.0 Operational Definitions

**Geriatric:** People above 60 years, who need special care for improving the quality of their life, come under the category of the aged

**Geriatrics:** The branch of medicine, which deals with the structural changes, physiology, diseases and treatment of aged people

**Geriatrician:** A doctor who studies and treats the diseases of aged people

**Gerontology:** The scientific study of the process of growing old

**Problem:** The problems for the purposes of this study are identified as challenges, obstacles or difficulties faced by the aged people, dementia patients and their family care-givers.

**Socio-Medical analysis:** It is the study of the important aspects of the ageing process, problems, interrelations of social welfare and healthcare. It embodies the subjective well-being, social support resources and active intervention with life of the aged people, dementia patients and their family care-givers.

3.3.0 Explications of the Research Title

“Contemporary Geriatric Problems of Kerala – A socio-medical Analysis”.

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3.3.1 Aim of the Study

The main aim of this research is to study contemporary Geriatric problems of Kerala through socio-medical analysis.

3.3.2 General Objective

The study aims at gaining a comprehensive and an in-depth understanding of the Contemporary Geriatric Problems of Kerala through Socio-Medical Analysis.

3.3.3 Specific Objectives are

- To make a historical survey of the ageing population
- To understand the ageing process with special reference to the condition in Kerala
- To analyze the socio-economic and medical problems of the aged people
- To explore the causes, types, clinical manifestations and problems of dementia
- To identify the role of family care-givers between the age group of 40-70 years in the effective management of dementia patients
- To find out the relationship between the subjective well-being and the social support resources of the family care-givers
- To find out the relationship between the subjective well-being and family burden of the family care-givers
- To suggest certain ways and means to ameliorate the sufferings of the aged people and to promote the well-being of the family care-givers

3.4.0 Research Hypotheses

- The aged people have to face formidable socio-economic and medical problems.
- The greater the dependency of the victims on the family care-givers in the activities of daily living, the greater is the intensity of the burden of family care-givers.
There is a significant relationship between the subjective well-being and social support resources of the family care-givers.

There is a significant relationship between the subjective well-being and burden of the family care-givers.

It is possible to ameliorate the sufferings of the aged people and to promote the well-being of the care-givers through the interventions of Government, social organizations, media, family members and individual himself.

3.5.0 Method of Data Collection

Descriptive Research “describes and interprets what is concerned with the conditions or relationships that exist; practices that prevail; benefits, points of view, or attitudes that are held; process that are being felt; or trends that are developing”(Best, 1970).15

The venerable elders are now facing many socio-economic and health care problems. The first part of the present study seeks to examine the socio-economic problems of the aged people in Kerala, taking a sample of 200 persons above 60 years interviewed. The second part deals with the dementia disorders, which are the most common cause of psychopathology in the aged people. The family members are the main care-givers and they need support. So 200 family care-givers between the age group of 40-70 years were interviewed for the purpose of this study. For the purpose, primary and secondary data were collected. The data were collected from three Districts in Kerala - Thrissur, Palakkad and Malappuram. The patients and their relatives were the primary sources. This method included interview schedule, questionnaires, observations and discussions that were recorded in a specific organized manner by using standardized tools. A few home visits

were made to obtain the data. More information about these patients was taken from the medical records department. Once the houses were located, the researcher would explain to the family members the purpose of the visit. After having obtained their consent, the data was collected. This way the researcher was able to collect the data from 200 families and from patients suffering from dementia. All the tools were translated into Malayalam. The data was collected from January 2010 to February 2011.

3.6.0 Tools used for Collection of Data

For collecting new unknown data required for the study of any problem, one may use various devices. For each type of research, we need certain instruments together for getting new facts and to explore new fields. The instruments thus employed as means are called tools. The selection of instrument or tool is vitally important for successful research (Sukhia, 1963).

3.6.1 A Socio-Demographic Interview Schedule (Developed by the Researcher)

The researcher herself formulated the interview schedule. This tool was used to obtain information about the socio-demographic variables like age, gender, education, income, religion, residence, occupation.

3.6.2 Subjective Well-being Inventory (Rup Nagpal and Helmut Sell 1992)

It was developed by Rup Nagpal and Helmut Sell (1992) which was used in this research study for assessing the subjective well-being of family care-givers. It attempts to measure the feeling of

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well-being or ill-being as experienced by an individual or a group of individuals in various day-to-day life concerns. The SWBI consists of 40 items on a three-point scale.

Standardized scales to rate the psychosocial well-being components by Subjective well-being inventory. This instrument developed by (Nagpal and Sell 1992), is used to measure an individual’s mental status regarding overall feeling about life. It has forty questions. The scale has been found to have high inter-rater, inter-scores, and test-retest reliability. In addition, it has proved its validity through many experiments and was therefore considered appropriate for this study.\(^{17}\)

Subjective well being is a composite measure of independent feelings about a variety of life concerns in addition to an overall feeling about life in positive and negative terms. Not surprisingly, general well being in its positive affect and to a somewhat lesser degree, in its negative affect, appears to be stable over time, to the extent that it can be called a personality trait. The subjective well being inventory is designed to measure feelings of well being or ill being as experienced by an individual, or a group of individuals, in various day-to-day life concerns. The inventory gauges eleven factorial dimensions are:

A. **General Well-being Positive Affects**

This factor reflects the feelings of well being arising out of an overall perception of life as functioning smoothly and joyfully. The items reflect our theoretical construct of positive affect only in what we had called its overall perspective.

B. **Expectation-Achievement Congruence**

The items in this factor refer to feelings of well being generated by achieving success and the standard of living as per one’s expectation, or what may be called satisfaction. The factor confirms expectation-achievement harmony.

C. **Confidence in Coping**

This factor relates to perceived personality strength, the ability to master critical or unexpected situations. It reflects what is sometimes called positive mental health in an ‘ecological’ sense, i.e. the ability to adapt to change and to face adversities without breakdown. It confirms mental mastery or inadequate mental mastery.

D. **Transcendence**

The items in this factor relate to life experiences that are beyond the ordinary day-to-day material and rational existence. They reflect feelings of subjective well-being derived from values of a spiritual quality. The factor confirms rootedness and belongingness.

E. **Family Group Support**

This factor reflects positive feelings derived from the percentage of the wider family (beyond the primary group of spouse and children) as supportive, cohesive and emotionally attached.

F. **Social Support**

This factor contains items describing the social environment beyond the family as supportive in general and in times of crisis.

G. **Primary Group Concern**

This factor covers feelings about the overall well-being of family life.
H. Inadequate Mental Mastery

All items with significant loadings on this factor imply a sense of insufficient control over, or inability to deal efficiently with, certain aspects of everyday life that are capable of disturbing the mental equilibrium. This inadequate mastery is perceived as disturbing or reducing subjective well-being. Most of the items of this factor reflect mental mastery over self and environment. It is noteworthy that the items on sadness and on anxiety/tension have significant loadings on this factor only. This factor is clearly similar to the factor ‘lack of self-confidence’, as described by (Bryant and Veroff, 1984)\textsuperscript{18} which also is related to depression, and the factor ‘irritability’ in neurotic out-patients described by (Lipman, et al. 1969).\textsuperscript{19}

I. Perceive Ill-Health

This is a one-dimensional factor since happiness and worries over health and physical fitness are highly correlated, and both load significantly here. Worry over disturbed sleep has significant loadings on this factor as well as on the factor of inadequate mental mastery.

J. Deficiency in Social Contacts

The common feature of the items constituting this factor are worries about being disliked and feelings of missing friends.

K. General Well-being-negative Affect

This factor reflects a generally depressed outlook on life.


\textsuperscript{19} Lipman, R.S. Rickles K. and Ushlenkut, (1969) Factors of Symptom distress, anxious neurotic out patients: \textit{Archives of general Psychiatry}, 21, pp.328-338
L. Question-Wise Scoring

According to the manual of the inventory, the scoring is as under:

In 19 of the 40 questions (questions 1-15, 21-23 and 28)

- Value 3 was given if the respondent has selected the category 1 (very much)
- Value 2 was given if the respondent has selected the category 2 (to some extent);
- Value 1 was given to category 3 (not so much).

In the remaining 21 questions (questions 16-20, 24-27 and 29-40)

- Value 1 was given if the respondent has selected the category 1 (very much)
- Value 2 was given if the respondent has selected the category 2 (to some extent);
- Value 3 was given to category 3 (not so much).

All the values were added to get the total score. The maximum score is 120. Higher the score, higher is the subjective well-being of a person. The total scores are the sum of the item responses and range from 40 – 120 with a cut off for an adult being 81, below which is indicative of lack of feelings of subjective well-being. Way of interpreting the scores is in terms of working out scores for each factorial dimension and drawing a profile of these factorial scores in each case. The minimum, maximum and mid value scores of each dimension is given in Table 2. It is possible to interpret the profile by comparing it with the middle values of scores in each factor. The person enjoys a good sense of well-being if the scores are above the mid value and below the mid value is the indicative of having trouble in terms of a happy living.

This is a semi structured interview schedule, was based on the Family burden scale developed by (Pai and Kapur, 1981)\(^\text{20}\) which was used in this research study for assessing the burden of family care-givers. It helped in the assessment of burden in six areas- financial, daily disruption of routine activities, disruption of family leisure’s, effect of physical health of others, effect on mental health of others and an overall subjective burden. It has a three-point scale, covering three categories. The burden scale contains 40 statements. Each statement has a three-point scale covering three categories, 1. No burden with score 1, moderate burden score of 2 and severe burden with score of three. Scores for each dimensions of burden were computed by adding the scores of the statements related to each dimension. Burden were assessed in four areas like financial burden, daily disruption of routine activities, disruption of family leisure’s, effect of physical and mental health of others and also overall burden. Then for each dimensions a percentage score was computed by using the formula:

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\text{Percentage score} = \frac{\text{total score}}{\text{maximum score of each item } \times \text{ total number of items for each dimension}} \times 100
\]

3.6.4 Social Support Resources (Vaux 1982)

(Vaux, 1982) designed this instrument to tap aspects of the social support network.\(^\text{21}\) Five kinds of supports are assessed — emotional, socializing, practical, financial assistance and guidance.


It was used in this research study for assessing the social support of family care-givers. We would like to ask you some questions about your friends and family, your social relationships in general. First, we would like to know about people who are important to you in a number of specific ways:

1. People who give you emotional support.
2. People you socialize with,
3. People who help you out with practical problems,
4. People who help you out financially,
5. People who give you advice and guidance.

3.7.0 Criteria for Selection of Family Care-Givers

It is always essential to formulate inclusion criteria and exclusion criteria of the sample under study. This has helped the researcher in having clarity of the boundaries under investigation. The inclusion criteria and exclusion criteria for the selection of respondents are listed below.

3.7.1 Inclusion Criteria

- The age group of above 60 years including both males and females for the analysis of the aged people
- The age group of family care-givers between 40-70 years
- The presence of family members who constantly take care of dementia patients are only included
- Only those family care-givers who have ability to communicate

3.7.2 Exclusion Criteria

- Patients diagnosed other than dementia
- Care-givers of patients who are regularly institutionalized.
- Family care-givers who are not able to express their feelings and emotions.
3.8.0 Dependent Variables and Independent Variables

Variables are the conditions or characteristics that the experimenter manipulates controls or observes (Best and Khan, 1999).22 (Good, 1945), (Arvil S, 1960) says; the vehicle of research cannot perform the function without it. Since it is, the methodology which lay out the way that formed research is to be carried out with detailed description of the research variable and the procedures.23

3.8.1 Dependent Variables

Dependent variables are the condition or characteristics that appear, disappear or change as the investigator introduces, removes or changes independent variable (Best, 1995).24

The various dependent variables are socio-medical problems, economic burden, family support, coping capacity and dependency

3.8.2 Independent Variable

Independent variables are conditions or characteristics that the investigator manipulates, control in his or her attempt, or ascertain a relationship to observed phenomenon (Best, 1995).25

The independent variables are education, age, gender, income, education, occupation, place of residence

3.9.0 Sources of Data

The data has been collected from primary and secondary sources.

3.9.1 **Primary Sources.**

The patients and their relatives were the primary sources. This method included personal interview, which was recorded in a specific organized manner of standardized scale, complemented by personal observation and active listening by the interviewer.

3.9.2 **Secondary Sources**

The data was gathered from dementia-oriented centers and personnel with special emphasis on doctors, memory clinic and dementia registries. They threw additional light on the various dimensions that would be added in the formulations of the study. The researcher visited many libraries, for the material related to the subject of this study. Kerala university library, MGR University, Madras, Rajagiri college library, Kalamassery; M.G university Kottayam, NIHMANS, Bangalore University. Apart from making these investigations, the research scholar participated in a number of talks, seminars, conferences, workshops etc.

3.10.0 **Research Setting**

The study was conducted in Thrissur District- 200 aged persons (above 60) from Tholur Panjayath and 200 family caregivers from three districts - Thrissur, Malapuram, Palakad.

3.10.1 **Sample of the Study**

“A good sample of a population is the one which within restrictions imposed size will produce the characteristics of the population which greatest possible accuracy” (Sukhia, 1966). A sample is a finite number of observations or cases selected from all cases in a particular universe often assumed to be representatives

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of the total group. A representative according to (Mouly, 1970) would be a miniature or replication of the population at least with respect to the characteristic under investigation.27

3.10.2 Population

Aged people above 60 years and family care-givers of patients with dementia 40-70 years and who fulfilled the inclusion criteria was considered as the unit under study.

3.10.3 Sample Size:

200 aged peoples from 100 households and 200 family care-givers of patients with dementia were interviewed for the purpose of study.

3.10.4 Sampling Technique:

Purposive sampling was adopted for selecting the unit.

3.11.0 Pilot Study

The objectives of the study were:

1. To find out the feasibility of the study.
2. To get the permission and the co-operation of the concerned institutional authorities and to gather the relevant data.
3. To gather information for framing a suitable sampling design
4. To find out which method of data collection would be effective.
5. To fix the universe of the study.

The pilot study helped the researcher to modify and design the study, attained to the research problems and objectives.

3.12.0 Research Design

The focus of the research was directed to assess the characteristics of the population understanding, to discover and test the interrelationship between variables. Hence, exploratory/descriptive design was adopted. The steps involved in such a design were:

- A clear formulation of the problem
- Clarifying the objectives
- Specifying the boundaries of the study.
- Identifying the source of data to be tapped.
- Selecting the appropriate methods and tools of data collection.
- Choosing the sample design and planning the execution of analytical design.
- The researcher adopted these steps carefully in order to provide the empirical and logical basis for drawing conclusions and gaining accurate knowledge.

3.13.0 Initial Interview and Informed Consent

An initial Interview was conducted with each of the family care-givers and informed about the nature of research and their consent to participate in the study was obtained, if they agreed to participate in the study, the pre-assessment was done using the tools mentioned. The intervention package was started individually.

3.14.0 Ethical Issues

As the first step, family care-givers were given information and their consent participation was sought.

- Confidentiality was maintained throughout the study.
- Willingness of the participants was ensured.
- After the data collection, the subjects who seemed to have difficulties or problems were referred to the units.

### 3.15.0 Data Analysis

The data analysis was predominantly done, using the Statistical Package for Social Sciences (SPSS 17.0). Percentage analysis of the socio-demographic data was worked out. Suitable statistical tests such as the t-test, ANOVA and Correlation Analysis were used to test the hypotheses and to generalize the results of the study.