CHAPTER - 4
METHODOLOGY

The present study is aimed at finding out the effect of a supportive intervention on the general health and well-being of the senior citizens. Senior citizens being the most vulnerable section, experience poor and frail health. Cumulative life stresses may lead to feeling of loneliness and may even contribute to various diseases. The extent to which an individual can take responsibility for his actions or blames it on fate also determines the extent to which he/she will be maladjusted in society. In the present study self-report measures of loneliness, negative mood scale, life experience survey, locus of control, social support and social provision included to assess the extent to which these aspects of elderly's are present in them before and after the intervention. The supportive intervention of the present study is a practical and positive approach for providing actual social support to the elderlies experiencing problems related to old age. The actual social support has been provided by the researcher herself as a main buffering agent to enhance the physical and psychological well-being of the senior citizens by reducing the negative aspects of loneliness, negative mood and life stress experience. Gender differences have also been taken into consideration by keeping equal number of each in the sample.

The goal of this present chapter is to clarify:

i) The design of the study  
ii) instruments used  
iii) Sample selection  
iv) instructions  
v) procedure  
vi) scoring  
vii) statistical analysis.
4.1 Design:

2 x 2 x 3 (A X B X C) factorial design have been used in this study. In this design factor A (Gender) consists of two levels with equal number of (A1) males and (A2) females in both the groups. Factor B (conditions) also consists of two levels social support intervention group (B1) and control group (B2) that received training in only breathing exercises. No supportive intervention has been given to the control group and factor C. (trials of assessment) consists of 3 levels (C1) - pre-intervention assessment trial (C2) post-intervention assessment trial and (C3) - follow-up assessment trial after two months of intervention.

The purpose of the study is to see the effect of social support on factors like life stress; negative mood regulation expectancies, enhancement of social support and social provision and change in locus of control. Social support has been used as an independent variable and life stress, loneliness, negative mood, locus of control and social provision and health and well-being have been used as dependent variables of the study. In the above mentioned design factors like gender, type of housing status (living in institution, with family or alone), were controlled by keeping equal number of such elderlies in both the control as well as social support intervention groups (Table 4.1)

a) Supportive Intervention :-

Supportive interventions prepared for the elderly deal with various physical, social and psychological aspects of their lives. Through this an effort has been made to spend quality time with the senior citizens by effectively doing things they would like to do such as playing cards or chess, reading newspaper etc. effort has also been made to talk about day to day life, sharing their past experiences and present daily problems.
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<td>60 YEARS &amp; ABOVE 48 SENIOR CITIZENS</td>
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<td>Social Support Intervention Gr.</td>
<td>Control Gr.</td>
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Non-Inst = Non-Institutionalized
Inst = Institutionalized
Gr. = Group
Pre-I = Pre-Intervention
Post-I = Post Intervention
A. T. = Assessment Trials
Placing higher value on the experience they have accumulated over the years. Efforts have been made to help the senior citizens build a strong social network by helping others, asking for advice and making others feel important. Thus through this intervention an effort has been made to boost their self-confidence and eventually make them more friendly, outgoing, make them more friendly, outgoing and independent.

The intervention was given in a period of 10 days in the following order.

1st and 2nd Day (Rapport): During the first two days rapport was established with the senior citizens by asking them questions related to their name, place they belong to, how they spend their day, about their interests and their sources of entertainment etc. A general talk about their social and family life was carried out and the purpose of visit was explained as a desire to spend constructive time with them. At the end of the second day they were asked to fill in pre-intervention questionnaires.

3rd Day: Old age brings along various changes in the physical health. Mostly the changes lead to one disease or the other for which they get medication and follow precautions. But with time they become passive to such changes and might give up their medical checkup and precautions. Thus attempt was made to help the elderlies to understand the importance of such efforts for their health and they were encouraged to take care of their health and follow the precautions themselves, thus to take the responsibility of themselves, their life.

Questions pertaining to the health of the senior citizens with regard to the changes they see in their health, their physical problems, medication and precautions and the type of diet they should follow were the focus of this day. They were also encouraged to complement their diet
with vitamins, tablets, have regular medical check-ups and follow the advice of the doctor carefully.

4th Day: Due to their physical condition either due to illness or fatigue the elderly restrict physical activity. Through this intervention effort was made to make the elderly participate in certain physical activities as walks, exercises going to market, banks etc. As being physically active is not only good for physical health but also for mental health.

After the discussion related to health issues of previous day the intervention on above mentioned issues was also carried out in face to face conservation situation. Certain points were also given to overcome problems of forgetting and a breathing exercise was taught.

5th Day: Due to breakdown of joint family system the elderly are often isolated and lonely with no one to talk to. Through this intervention, effort was made to have general talks with the elderly on the topics of their interests. The talks about their past, present interest or future fears were carried out. This was done to make them feel that they are not alone and they can talk openly to someone without the fear of being disclosed.

Questions pertaining to their happy/unhappy memories, the changes that they see in today's society. Do they see these changes as beneficial or detrimental? How well have they adjusted to the changing times were discussed at length. Their opinion was asked about the younger generation and how well they got along with them.

6th Day: This was kept as a relaxation day to either go for walks or play games as chess or cards according to the preference of older adults.
7th Day: Religion is an important variable, highly associated with life satisfaction among the elderly. It not only brings peace but is also a source of support for them. Through religious activities they are able to meet other people with similar interest and values and are able to build-up supportive social contacts and relationships even with people they do not know earlier.

Generally, in this session the questions pertaining to which religion they follow, when they started their practice, what type of practices and activities they are involved in, which age did they consider right for starting religious practices? And did their practice provide benefits to them were discussed.

8th Day: The older adults might become lonely and depressed, due to loss of loved ones, separation from children, losing interest in other people, unable to adjust well with others, their physical health etc. Through this intervention effort has been made to help the elderly overcome their loneliness.

Problems related to depression, loneliness and bereavement among the older adults were discussed for example why do they feel lonely, how they cope with it. Certain suggestions were given to overcome such problems. Ways to improve old relations and develop new ties were shared with them extensively.

9th Day: Friends are one of the most important source of social support of the elderly. Through this intervention effort was made to help them understand how good friends can be retained.

Friends and family members were focus of this intervention. Elderlies agree that good relations buffer against stress and enhance health and well-being. General questions relating to the elderly's friends circle
were discussed. How they feel with their friends, do they share and solve each others problems etc.

10th Day: Social support was the center of focus. It was suggested that it was social support which serves to improve health and helps overcome problems related to depression, loneliness, bereavement and gives a sense of belonging and well-being.

The elderlies were asked to refill all the questionnaire they had filled at the begining of this intervention (post-intervention questionnaires).

It was also a good bye day. Their impressions of the interventions was taken and it ended on a friendly note. They were told to freely approach the researcher if ever they need any help. And the researcher assured them she will meet them again soon which she did at the follow-up.

b) Relaxation Exercise for Control group

The senior citizens were motivated to perform these exercises by sharing with them the beneficial results of this intervention reported in previous researcher 9See Appendix-)

Breathing Exercise:
1) Sit quietly in a calm environment (quiet room or a place of worship) in a comfortable position.
2) Close your eyes.
3) Deeply relax all your muscles, beginning at your feet and progressing up to your face. Keep them relaxed.
4) Breathe through your nose. Become aware of your breathing. As you breathe out say the word "one" silently to yourself. For example breathe
in out, "one", in out, "one" breathe easily and naturally.

5) Continue for 10-20 minutes. You may open your eyes to check the time, but don't use an alarm. When you finish sit quietly for a few minutes. At first with your eyes closed and later with your eyes opened. Do not stand up for a few minutes.

6) Do not bother whether you are successful in achieving a deep level of relaxation. Maintain a passive attitude and permit relaxation to occur at its own pace. When distracting thoughts occur, try to ignore them by not dwelling upon and returning to repeating "one". With practice the response will come with little effort. Practice the technique once or twice daily, but not within two hours after meals. Since the digestion process seem to interfere with the elicitation of relaxation response.

4.2. Instruments used: The following tests were used in the present study


The LES has been developed by Sarson et al. (1978) to assess the impact of life change. It is a 57 item self-report measure that allows the respondents to indicate events they have experienced during the past one year. The scale has two portions. Section I is designed for all respondents and contains a list of 47 specific events plus 3 blank spaces which subjects can indicate other events they may have experienced. The events listed in this section refer to life changes common to individual in a wide variety of situations. The 10 events listed in section II are designed primarily for use with students, but could be adopted for use with other population. Since section I is appropriate for use with general population, in this study only section I containing 47 items was used.
The format of the 47 items was used to rate separately the desirability and impact of events they experience. They indicate the events experienced during 0-6 months and 6-12 months as well as:

1. Whether they view the event as being positive or negative; and
2. The perceived impact of the particular event on their life.

Reliability of Life Experience Survey:

The author reports two test-retest reliability for positive and negative life change score. The test-retest correlation for positive change scores were 19 and .53 (P < .001). The reliability coefficient for negative change scores were .56 and .88 (P < .001). The coefficient for the total score were .63 and .64 (P < .001).


The SSQ, constructed by Sarason et al. consists of 27 items. It has been factor analytically derived from a large body of items intended to measure the functions of social network. The two basic elements studied by this scale are:

i) No. of available others to whom individual believe they can turn to in times of need (SSQN).

ii) The degree of satisfaction they anticipate from support they see as available on a 6 point rating scale (SSQS).

Reliability of Social Support Questionnaire:

The correlation of items with the total score for SSQN ranged from .51 to .79. The correlation of items with the total score for SSQS ranged from .48 to .72. The coefficient of internal reliability was .97. The
alpha coefficient for 3 scores was .94. The test retest correlation for Number and Satisfaction were .90 and .83 respectively.

For the present study the scores were obtained in terms of both:

i) the number score (N) as well as the

ii) the satisfaction score (S)


The social provision scale is designed to assess the extent to which the person's current social relationships provide the six relational provisions in terms of

a) Attachment - provided by intimate relationship in which the person receives a sense of security and safety; b) social integration - provided by a network of social relationships in which the individuals share interests and concerns; c) reassurance of worth - provided by relationships in which the person’s skills and abilities are acknowledged; d) guidance - provided by relationship with trustworthy and authoritative individuals who can provide advice; e) reliable alliance - derived from relationship in which the person can ask others for assistance under any circumstance and; f) opportunity for nurturance - derived from relationships in which the person is responsible for the well-being of others.

The scale consists of 24 items. In this measure 12 statements are recorded positively and 12 statements are recorded negatively, assessing each social provision. Respondents indicate the extent to which each statement described their current social relationships. On a four point rating scale ranging from strongly disagree to strong agree.
Reliability of Social Provision Scale:

Previous research has supported the reliability of the social provision scale. Alpha coefficient ranging from .65 to .76 for the subscales measuring each social provision has been reported. The alpha coefficient for the total provision score was found to be .91 by (Cutrona and Russell, 1987).

4) Internal -External Locus of Control Inventory: Rotter (1966).

Locus of control scale was developed by Rotter (1966). It consists of 23 scored items and six filler items. Each item has two statements a and b. The subject has to respond to the one to which he/she strongly agrees. This scale sample incidents from different life situations where locus of control attitude might be relevant to behavior. Each item is given weightage and it is hoped that the content of the various items would provide an adequate sampling of situations. In which internal-external locus of control might be expected to affect the behavior. In other words, it has been developed as a broad gauge instrument, not as an instrument to allow for very high prediction in specific situation. But rather to allow for a low degree of prediction of behavior across a wide range of situations.

Reliability of locus of control:

The test retest reliability ranged from .49 to .83 depending upon the period and particular population over the period of 3, 6, and 9 months. Internal reported reliability coefficient of .75, .31 and .26 respectively.

5) Negative Mood Regulation Expectancies: Catanzaro and Mearns (1990);
The negative mood scale was developed by Salvatore J. Catanzaro and Jack Mearns (1990). The scale measures the generalized expectancies for the negative mood regulation. The construct was defined as the expectancy that some behavior or cognition will alleviate a negative mood state. Data from 5 samples of college undergraduates was reported. Internal consistency, discrimination validity from social desirability and temporal stability was demonstrated for a 30 item scale derived from an initial pool of 50 items. Analysis revealed a) modest correlations of the 30 item scale with internal-external control, b) that higher scores on the negative mood regulation scale reported few symptoms of depression and c) that the negative mood regulation scale predicted a different pattern of emotions that the Beck Depression Inventory did.

The scale consists of 30 items. In this measure 15 items are positively recorded and 15 items are negatively recorded. The respondents respond on a five point rating scale ranging from strongly disagree to strongly agree. High score indicates less negative mood.

**Reliability of Negative Mood Regulation Scale:**
Catanzaro and Mearns reported alpha coefficients ranging from .86 to .92. Test-retest reliability for six months was .65 (Mearns, 1991).

6) **UCLA Loneliness Scale : Russell (1980)**

The UCLA Loneliness scale has been developed by Daniel W. Russell (1980). The scale consists of 20 statements that reflects how lonely individual describe their experiences. There are 9 positively recorded items and 11 negatively recorded items. The respondent respond on a four point rating scale ranging from “never” to “always”.

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Reliability of UCLA Loneliness Scale:
The reliability coefficient ranges from .89 to .94 across the samples. With the test-retest correlations of .73 among the elderly.

7) Assessment of Physical Health:
The physical health was assessed by a check list prepared for the elderly. The respondents have to tick the physical illness they suffered from the check list includes illness like diabetes, high blood pressure, heart attack, arthritis, asthma, with minor problems like indigestion, fatigue, restlessness, high temper, hearing & vision inability, sleep problems etc.

8) Demographic profile:
A demographic profile was used with the elderly together general information about their family, income, their vocational activities and their health. The questions were about the age, educational qualification, marital status, source of income, status retired or in job. The recreational activities as watching TV, playing games, going for an outing. The illness they suffer and for how long they are on medication etc. The demographic profile was used to establish rapport with the senior citizens before giving them the supportive intervention.

4.3 Primary Sample:
The world health organization has identified with the age of 60 years as senior citizens. Thus keeping the WHO norms in view in the present study 60 years and above sample was selected. An incidental sample of 48 senior citizens were selected. This sample was divided into two major groups with equal member of males and females (i.e. 24 in each group). Each group was further categorized into social support intervention
group and control group (i.e. 12 being in each group consisting 4 subjects of the institutionalized, non institutionalized and alone category). The first group (i.e. institutionalized consisted of elderlies residing in the institutions. The second group (i.e. non-institutionalized consisted of elderlies living with their families (i.e. spouse & children) and the third group (i.e. alone) consisted of elderlies who were living alone as they were either unmarried or widowed. Prior to the intervention the older adults were asked about their preference regarding their participation on the intervention. Thus older adults who were willing to participate in the intervention were kept in the social support intervention group and those not keen for intervention were placed in the control group. They were just taught a breathing exercise.

4.4 Instructions :

The instructions given on each of the questionnaire were read loudly to the subjects according to their choice of language hindi or english answered the questions. Researcher assisted them in this task.

4.5 Procedure :

After selecting the sample the subjects in the social support intervention group were not individually for a period of 10 days with one to one and half hour each day. Each one being met twice a week. For the first two days rapport was established. On the first day the demographic profile and the physical health questionnaire was filled. At the end of the second day pre-intervention questionnaires were filled. From third day onward the social support intervention for 8 days began in which various issues related to health, diet, feeling of depression, loneliness, bereavement and social support were talked about by the researcher. To help them, in a very humble way the senior citizens were made to have an insight on
their problems. Certain useful tips or suggestions were given to them during the course of intervention. A set of past-intervention questionnaire were filled immediately after the completion of the intervention. Last of all the elderly were asked their opinion with regard to this workshop and would they like such a work to continue in future. What guidance they will like to give to the younger generation so that they do not suffer from the problems experienced by them. After 2 months for follow-up assessment they were again approached to fill up the questionnaire.

The subjects in the control group were treated like the social support intervention with the only difference that they were not exposed to the social support intervention. On the first day subjects demographic profile and health questionnaires and the pre-intervention questionnaires were filled. This group was then given the breathing exercise and were told about its various benefits. It was the subjects preference if they would like to continue with the breathing exercise or not. The control group was met only once in 10 days. On the 10th day for past-assessment and after two months for follow-up of the questionnaires the control subjects were met to fill the questionnaires.

Scoring:

All the instruments were scored separately for each subject.

a) The Life Experience Survey (LES):

Ratings are done on a 7 point scale ranging from -3 to +3. A rating of -3 indicates a negative event judged to have had an extreme impact on the respondent. A rating of +3 indicates a positive event having an extreme impact. Summing the impact ratings of events designed as positive by the subject provides a positive change score. A negative
change score. A negative change score is derived by summing the impact rating of those events experienced as negative by the subject. Negative, positive (-ve, +ve) and total scores are summed up for each subject.

b) Social Support Questionnaire (SSQ):

The SSQ yields two scores:

1) Perceived availability of the number of supportive persons listed (SSQN) i.e. number score N and
2) Satisfaction with available support (SSQS) i.e. satisfaction score (S).

The overall N and S scores are obtained by dividing the number of N and S scores for all the items by 27, i.e. the number of items.

The social support available to deal with a given problem is rated on linked scale ranging from "very satisfied" to "very dissatisfied".

C) Social Provision Scale:

Scoring of Social Provision Scale format was simplified to a four point rating scale. This scale uses likert type response continuum; strongly disagree, strongly agree. 1 mark is given to strongly disagree, 2 marks to disagree, 3 marks to agree and 4 to strongly agree. Negatively worded statement were reversed to give 4 strongly disagree, 3 to disagree, 2 to agree and 1 to strongly agree. 2,3,6,9,10,14,15,18,19,21,22,24 items are negative items and the rest being positive. By adding the scores of all the items total number of scores were obtained by adding the scores of four items each, scores for six of the provisions were obtained in terms of attachment, social integration, guidance, reassurance of worth and opportunity of nurturance respectively.
d) Internal-External Locus of Control Inventory:

Scores are calculated by summing the total number of responses for externality and internality. The items are scored as 0 and 1. Higher score represents externality.

e) Negative Mood Regulation Expectancies (NMR):

Scoring of the negative mood scale has been done on a five point rating scale i.e. strongly agree, disagree, agree equal, disagree, strongly disagree. The negatively worded items are 3,5,8,9,14,18,19,21,24,25,27,28,30. The scores for such items are reversed. The total scores of the negative mood scale is obtained by adding up the scores given to each item.

f) UCLA Loneliness Scale:

The scoring of the UCLA loneliness scale has been done on a four point scale i.e. never, rare, sometimes, always. The items 1,5,6,9,10,15,16,19,20 are negatively stated for which the scores are reversed. The scores are obtained by adding up the scores given to each item. High scores indicate greater degree of loneliness and low scores indicate less degree of loneliness.

4.7 Statistical Analysis:

Following statistical procedures are employed to analyze the data:

1) t-test: t-test was carried out on the pre-treatment data of all the dependent variables (life experience survey, locus of control, loneliness, negative mood scale, social support questionnaire and social provision scale) separately for male as well as female group. This analysis was
performed to see if any group differences existed prior to treatment.

2) Repeated Measure Analysis of variance:

From the findings of t-test it was apparent that treatment as well as control groups were comparable on all the dependent variables prior to treatment. Therefore, treatment related changes pre to post and post to following up of these dependent variables were further analyzed by these factor repeated measure analysis of variance (mixed) design. (Burning and Kintz, 1987) with repeated measures taken over trials.

3) Newman Keuls’ Multiple Range Test:

All the post hoc comparisons among all means were made by Newman Keuls’ Multiple Range Test (Burning and Kintz, 1987).