Appendix - A

INTERACTION WITH SUBJECT EXPERTS REGARDING RESEARCH TOPIC

Professionals in the fields of Nutrition, Reproductive health, Life skills and Statistics were consulted and their inputs were incorporated in the research.

Research Design
- Dr. Shobha Srinath, Associate Professor of Psychiatry, NIMHANS, Bangalore
- Dr. Shekar, Associate Professor, NIMHANS, Bangalore
- Dr. Rama, Department of Education, Regional Institute of Education, Mysore.

Communication Strategies
- Dr. Parthasarathy, Associate Professor, NIMHANS, Bangalore
- Dr. MKC Nair, Director, Child Development Centre, Trivandrum
- Dr. Nasira Baig, Head of the Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Uma Devi, Research Officer, Indian Institute of Health and Family Welfare, Hyderabad

Nutrition
- Dr. Usha. M. N, Head of the Department of Food & Nutrition, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Ushadevi. C, Senior Scale Lecturer in Food & Nutrition, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Anjali Devi, Professor, Department of Food and Nutrition, Women’s College, Hyderabad

Reproductive Health
- Dr. Anuradha, Consultant gynecologist, Bangalore.
- Smt. Rekha Jayaprakash, Branch manager, FPAI, Bangalore

Life Skills
- Dr. Srikala Bharath, Additional Professor of Psychiatry, NIMHANS, Bangalore
- Dr. Shekar Shesadri, Associate Professor of Psychiatry, NIMHANS, Bangalore
- Dr. K. V. Kishore Kumar, Psychiatrist, NIMHANS, Bangalore
Statistics

- Dr. Venkataswamy Reddy, Head of the Department, Department of Bio Statistics, NIMHANS, Bangalore
- Sri. Suresh, Senior Scientist, National Institute of Animal Nutrition and Physiology, Bangalore
DATE: 

NAME: 

DATE OF BIRTH: 

AGE: 

CLASS: 

ADDRESS: 

SUBJECTS: 

PHONE NUMBER: 

NUTRITION PROFILE 

Read each statement carefully and choose the most appropriate answer according to you. Please use a tick mark (✓) to indicate your response. 

1. Number of meals per day
   2 meals [ ] 3 meals [ ] 4 meals [ ] 

2. Are you a Vegetarian or Non-vegetarian?
   Vegetarian [ ] Non-vegetarian [ ]

3. Do you consume breakfast daily?
   Yes [ ] No [ ]

4. Do you pack lunch from home to college?
   Yes [ ] No [ ]
5. Do you consume roadside foods?
   Yes ☐  No ☐

6. Do you prefer food from hotels/canteen to home cooked food?
   Yes ☐  No ☐

7. Do you consume snacks in between meals?
   Yes ☐  No ☐

8. Are you satisfied with your eating habits?
   Yes ☐  No ☐

9. Would you like to know more about nutrition?
   Yes ☐  No ☐

10. In the last six months have you tried to control your weight (Lose / gain)?
    Yes ☐  No ☐

11. If yes, how?

12. Do you exercise or participate in sports activities daily?
    Yes ☐  No ☐

13. Do you ever fast (Go without food)?
    Yes ☐  No ☐

14. If ‘Yes’, how frequently?
    1. Once a week ☐
    2. Once in fifteen days ☐
    3. Once a month ☐
DETAILS ABOUT FAMILY

1. Type of family you live in
   - Nuclear □
   - Joint □
   - Extended □

2. Do you think your parent usually listens to you and take your feelings seriously?
   - Yes □
   - No □

3. Do you communicate freely with your parents?
   - Yes □
   - No □

4. Are you happy with your relationship with your siblings?
   - Yes □
   - No □

5. Do you think your parents pay more attention to your brother/s or sister/s
   - Yes □
   - No □

6. If yes, why do think so?

7. Do you confide in any family member/relative?
   - Yes □
   - No □

8. If yes, state your relationship to that person

9. Have you ever thought seriously about running away from home?
   - Yes □
   - No □

10. Do any of your family members suffer from mental illness?
    - Yes □
    - No □
11. Do any of your family members suffer from chronic illness?

Yes ☐ No ☐

12. Do you think the following problems exist in your home?

<table>
<thead>
<tr>
<th>Problems</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital conflict</td>
<td></td>
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<tr>
<td>Divorce/Separation</td>
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<tr>
<td>Death of a parent/Family member</td>
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<tr>
<td>One parent away from home on work</td>
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<tr>
<td>Harsh disciplining</td>
<td></td>
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<tr>
<td>Generation gap</td>
<td></td>
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<tr>
<td>Economic hardships</td>
<td></td>
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<tr>
<td>Family violence</td>
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<tr>
<td>Any other</td>
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</tbody>
</table>

**COLLEGE / STUDY HABITS**

1. Are you happy with your performance in the last examination you have completed?

Yes ☐ No ☐

2. Have you ever failed to clear an exam in the first attempt?

Yes ☐ No ☐

3. Are you satisfied with the atmosphere at college?

Yes ☐ No ☐

4. Have you ever had trouble with any of the following people at college? (Tick your response)

Classmates ☐

Seniors / juniors ☐
5. What is the best event / achievement in college that you cherish?

6. List the extra curricular activities you like participate in?

7. Have you ever been told that you have a learning problem or do you think you have a learning problem?
   Yes  No

8. How many hours do you spend in studies at home?

9. Who helps you in your studies?
   Parents  Siblings  Friends

10. Do you attend tuitions?
    Yes  No

11. Is it important to you that you do well in your studies?
    Yes  No
1. Do you regularly participate in the following recreational activities?

<table>
<thead>
<tr>
<th>Activities</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going to movies</td>
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<tr>
<td>Visiting friends</td>
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<tr>
<td>Playing indoor games</td>
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<td>Outdoor games</td>
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<tr>
<td>Reading</td>
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<tr>
<td>Listening to music</td>
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<tr>
<td>Family outings</td>
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<tr>
<td>Any other</td>
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</tbody>
</table>

2. During the past two weeks, have you often felt sad or down or as though you have nothing to look forward to?

Yes ☐ No ☐

3. When you get angry, do you do violent things (feel out of control)?

Yes ☐ No ☐

4. Do you have trouble handling conflicts and emotional upsets?

Yes ☐ No ☐

5. Do you get upset when left out or ignored by your friends/family members?

Yes ☐ No ☐

6. Can you laugh at your own vulnerabilities and imperfections?

Yes ☐ No ☐

7. Can you accept your mistakes when others point them out?

Yes ☐ No ☐
8. Have you ever seriously thought about suicide/made a plan/attempted?
   Yes ☐  No ☐

9. Would you like to get counseled about something you have been worried?
   Yes ☐  No ☐

SELF

1. In a few words how best you can describe yourself.

2. If you could change one thing about your life or yourself, what would it be?

3. Express your best qualities (strengths) and weaknesses.

4. What is your ambition in life?
MEDICAL HISTORY

1. Do you have any health problems?
   Yes ☐  No ☐

2. If Yes, state the problem.

3. Are you taking any medicine now?
   Yes ☐  No ☐

4. Are your periods regular?
   Yes ☐  No ☐

6. Please tick whether you are worried and if you need information about any of the following:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Yes</th>
<th>No</th>
<th>Need information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
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<tr>
<td>Weight</td>
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<tr>
<td>Appetite</td>
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<td></td>
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<tr>
<td>Teeth</td>
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<tr>
<td>Bad breath</td>
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<tr>
<td>Nausea/vomiting</td>
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<td>Cold/cough</td>
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<tr>
<td>Wheezing</td>
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<tr>
<td>Chest pain</td>
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<tr>
<td>Size of breasts</td>
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<td></td>
<td></td>
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<tr>
<td>Skin(acne/rash)</td>
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<tr>
<td>Vision (use of spectacles)</td>
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<tr>
<td>Ear ache / hearing</td>
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<tr>
<td>Head aches/migraine</td>
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<tr>
<td>Dizziness/Fainting</td>
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<tr>
<td>Diarrhea/constipation</td>
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<tr>
<td>Stomach ache</td>
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<td>Back pain</td>
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<tr>
<td>Muscle or joint pain in arms/legs</td>
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<td>Bed wetting</td>
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<tr>
<td>Frequent/painful urination</td>
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<tr>
<td>Discharge from the Vagina</td>
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<tr>
<td>Genital hygiene</td>
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<tr>
<td>Menstruation/periods</td>
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<tr>
<td>Irregular</td>
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<td>Less</td>
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<td>More</td>
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<tr>
<td>Dysmenorrhea/painful menstruation</td>
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<td></td>
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<tr>
<td>Masturbation</td>
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<tr>
<td>Sexually transmitted disease</td>
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<tr>
<td>HIV/AIDS</td>
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<tr>
<td>Feeling tired</td>
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<td></td>
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<tr>
<td>Frequently</td>
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<tr>
<td>Feeling sad or crying always</td>
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<tr>
<td>Sleep disturbances</td>
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<td></td>
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<tr>
<td>Anger management</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Stress</td>
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<tr>
<td>Suicidal thoughts</td>
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<tr>
<td>Violence/personal safety</td>
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<tr>
<td>Any other (specify)</td>
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</tbody>
</table>
Appendix-B 2

QUESTIONNAIRE TO ELICIT SOCIO-DEMOGRAPHIC DETAILS

SOCIO-DEMOGRAPHIC DETAILS

1. Name:
2. Age & Date of Birth:
3. Class:
4. Combination
5. Are you attending college as
   a) Day Scholar
   b) Resident at Hostel
6. Marital Status
   a) Married
   b) Unmarried
7. Religion
   a) Hindu
   b) Muslim
   c) Christian
   d) Any other
8. Type of family
   a) Nuclear
   b) Joint
   c) Extended
9. Domicile
   a) Urban
   b) Semi-urban
   c) Rural
10. Information about parents

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Father</th>
<th>Mother</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Age</td>
<td></td>
<td></td>
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<tr>
<td>2) Alive / Not alive</td>
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<tr>
<td>3) Education</td>
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<tr>
<td>4) Occupation</td>
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<tr>
<td>a) Professional</td>
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<tr>
<td>b) Government</td>
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<tr>
<td>c) Private Sector</td>
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<tr>
<td>d) Business</td>
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<tr>
<td>e) Any other</td>
<td></td>
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</tr>
</tbody>
</table>

11. Information about family

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Relationship to respondent</th>
<th>Sex</th>
<th>Age</th>
<th>Marital Status</th>
<th>Health problems if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>5</td>
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</tr>
</tbody>
</table>
12. Do you think the following problems exist in your home?

<table>
<thead>
<tr>
<th>Problems</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Marital conflict</td>
<td></td>
<td></td>
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<tr>
<td>2) Divorce / separation</td>
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<tr>
<td>3) Death of a parent</td>
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<tr>
<td>4) Harsh disciplining</td>
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<tr>
<td>5) Generation Gap</td>
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<tr>
<td>6) Economic hardships</td>
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<tr>
<td>7) Family violence</td>
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<tr>
<td>8) Any other</td>
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</tbody>
</table>
ATTITUDE SCALES

An attitude involves feelings, values and appreciations. An attitude can also be described as a predisposition to actions. Attitudes are frequently measured in health promotion programs as they are very important in determining health behavior. Without favorable attitudes towards health behavior, an individual is not likely to be sufficiently motivated to continue or change that behavior. A scale is a testing instrument that requires the respondent to choose between responses on a continuum. Three Likert type scales with five-point choice of responses were designed to assess the attitudes of adolescent girls towards nutrition, reproductive health and life skills in the present study. The choice of responses was as follows:

- SA - Strongly Agree
- A  - Agree
- NS - Not Sure
- D  - Disagree
- SD - Strongly Disagree

Scoring was done depending on how the statements were phrased. For example, the continuum of responses may be weighted from 1 to 5, with the lowest score for a strongly disagree statement and the highest score for a strongly agree statement. Thus, if a respondent ticks strongly agree to the statement, “Traditionally processed foods are nutritious,” the score would be 5. An undecided response would rate 3, and a strongly disagree would rate 1. The scoring was reversed for oppositely worded statements, such as “A low fat or no fat label indicates that the food has no calories.” In this case, a strongly disagree response would score as 5.

ATTITUDE SCALE ON NUTRITION

Forty statements pertaining to eight issues of nutrition which emerged as areas of concern in the problem survey were included in the scale. The issues included in the scale were:

- Importance of nutrition
- Good food habits
- Healthy choices
- Food hygiene
- Importance of water
- Weight management
- Psychological function of food
- Myths about food
ATTITUDE SCALE ON REPRODUCTIVE HEALTH
Forty statements pertaining to seven issues of reproductive health which emerged as areas of concern in the problem survey were included in the scale. The issues included in the scale were:

- Menstruation
- Sexuality
- Love and Marriage
- Family planning
- Sexual relationships
- Access to information
- Sexually Transmitted Diseases including HIV/AIDS

ATTITUDE SCALE ON LIFE SKILLS
Fifty three statements pertaining to the ten life skills as outlined by the World Health Organization were included in the scale. The ten life skills are as follows:

- Self-Awareness
- Empathy
- Effective Communication
- Interpersonal Relationships
- Problem solving
- Decision making
- Creative thinking
- Critical thinking
- Coping with emotions
- Coping with stress
Appendix-B 3
ATTITUDE SCALE ON NUTRITION
(For both pre test and post test)

INSTRUCTIONS
Read the following instructions carefully before you begin to respond to the statements given in this scale.
Please note that there is no right or wrong answer.
To ensure confidentiality you need not sign or write your name.
Read each statement carefully and then answer by putting a tick against any of the five responses.
SA - Strongly Agree
A - Agree
NS - Not Sure
D - Disagree
SD – Strongly Disagree

NOTE: Please respond to all the statements because your responses are important.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>STATEMENTS</th>
<th>SA</th>
<th>A</th>
<th>NS</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>We must include the right foods in right amounts in our daily diet to remain healthy and free from diseases.</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>Traditionally processed foods are nutritious.</td>
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<tr>
<td>3.</td>
<td>Iodised salt is a healthy choice.</td>
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<tr>
<td>4.</td>
<td>The use of sugar, jaggery and salt should be restricted.</td>
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<tr>
<td>5.</td>
<td>Mother’s diet and health prior to pregnancy has a great influence on the unborn child.</td>
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<tr>
<td>6.</td>
<td>Nursing mothers need more food to eat than pregnant women.</td>
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<tr>
<td>7.</td>
<td>Diet related disorders can be prevented through proper dietary intake.</td>
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<tr>
<td>8.</td>
<td>During periods of growth a greater consumption of proteins should be encouraged.</td>
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<tr>
<td>9.</td>
<td>Breakfast is an important meal.</td>
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<tr>
<td>10.</td>
<td>Tea should not be had immediately before, after or during meals.</td>
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</tbody>
</table>
11. Eating food while watching Television is not a healthy habit.
12. You need less food in hot weather than when it is cold.
13. Everyone needs vitamin supplements.
14. Fasting is the best way to detoxify your body.
15. A low fat or no fat label indicates that the food has no calories.
16. Almost three-fourths of our body is made of water and we need a regular supply of water to sustain life.
17. Drinking more water only increases trips to the toilet.
18. Drinking more water strains the kidneys.
19. Nutrition and health are interrelated
20. Spoilt, stale and adulterated foods are harmful for health.
21. Methods of cooking play an important role in retention of nutrients.
22. Eating foods that are sold on the roadside is bad for health.
23. Regular exercise is as important as consuming a healthy diet.
24. Carrying packed lunch to college is not very interesting.
25. Buying food sold at the canteen is convenient than carrying packed lunch.
26. Dieting is a must to look attractive.
27. The best way to lose weight is to skip one or two meals daily.
28. Fruits and vegetables must be consumed daily.
29. Friends and fast foods go hand in hand.
30. Eating one good meal a day takes care of most of my dietary requirements.
31. Consuming non-vegetarian foods on certain days is inauspicious.
32. Meal times form an important part of the family time.
33. A person's state of mind influences his/her food intake.
34. Nutritional status during adolescence influences the same during later years of life.

35. Prevention is the best way to avoid many diet related disorders.

36. Diet related disorders form a major part of health problems in later years of life.

37. Snacks can provide nutrients if chosen properly.

38. Only snacks that are advertised widely are worth buying.

39. Healthy food choices ensure better nutritional status

40. Regular eating habits are important to maintain a healthy body.
Appendix-B 4

Questionnaire on Nutrition knowledge
(For Pre Test and Post Test)

INSTRUCTIONS:
Read the instructions carefully before you begin answering each section.
NOTE: Please answer all the questions.

I. MULTIPLE CHOICES:
Read each statement carefully and choose the most appropriate answer according to you. Please use a tick (✓) to indicate your response.

(1) We should eat food
   a) Only to satisfy hunger
   b) to enjoy different tastes
   c) to provide nutrients which are vital for life only to maintain body weight

(2) Which is the most important meal of the day?
   a) Breakfast
   b) Lunch
   c) Tea
   d) Dinner

(3) Which of these provide more calories?
   a) Fats
   b) Proteins
   c) Carbohydrates
   d) Water

(4) The nutrient involved in body building and maintenance of tissues is
   a) Vitamins
   b) Fats
   c) Carbohydrates
   d) Proteins
(5) The nutrient that provides more energy in our diet is
   a) Vitamins
   b) Carbohydrates
   c) Minerals
   d) Fibre

(6) The nutrient essential for proper utilization of major nutrients is
   a) Fibre
   b) Water
   c) Minerals
   d) Vitamins

(7) Minerals are:
   a) Structural components of the body
   b) Required in very small quantities
   c) Act as catalytic agents in many reactions inside the human body
   d) All of the above statements are true

(8) Which one of these is very high in protein content?
   a) Wheat
   b) Corn
   c) Soya bean
   d) Ragi

(9) Milk and milk products are an excellent source of
   a) Calcium
   b) Iodine
   c) Iron
   d) Fibre

(10) The best source of vitamin C is
    a) Milk
    b) Amla(Gooseberry)
    c) Apple
    d) Pineapple
(11) Deep green leafy vegetables, carrot, papaya, pumpkin and mango are rich in

   a) Proteins
   b) Vitamin A
   c) Only fiber
   d) All of the above

(12) Whole grains, pulses, milk products are good sources of

   a) Vitamin C
   b) Vitamin A
   c) Vitamin D
   d) B-Complex vitamins

(13) The sunlight helps us to produce

   a) Vitamin A
   b) Vitamin C
   c) Vitamin D
   d) Vitamin B

(14) Green leafy vegetables and Ragi are very good sources of

   a) Iron and calcium
   b) Only Iron
   c) Iron, calcium and fiber
   d) None of the above

(15) Lack of iron in the diet leads to

   a) Loss of body weight
   b) Anemia
   c) Skin rashes
   d) Obesity

(16) Prolonged protein energy deficiency in adults leads to

   a) Anemia
   b) Rickets
   c) Fever
   d) Chronic Energy Deficiency (CED)
(17) Vitamin A deficiency leads to
   a) Frequent infections
   b) Poor growth
   c) Impairment in vision
   d) All of the above

(18) Vitamin C deficiency leads to
   a) Infections
   b) Poor wound healing
   c) Bleeding gums
   d) All of the above

(19) Deficiency of Iodine leads to
   a) Beri Beri
   b) Scurvy
   c) Goitre
   d) None of the above

(20) The age at which peak bone density is achieved in humans
   a) Between 35-40 years
   b) Before puberty
   c) After 40 years
   d) Between 40-60 years

(21) Osteoporosis can be prevented by
   a) Regular exercise
   b) Adequate calcium intake
   c) Adequate intake of fruits and vegetables
   d) All of the above are true

(22) Body Mass Index (BMI) is used
   a) To assess under-nutrition and over-nutrition
   b) To find out the energy requirement
   c) To assess weight gain
   d) To establish an ideal body weight
(23) The ideal Body mass Index (BMI) is

   a) < 18  
   b) 18-25  
   c) 25-30  
   d) 30

(24) A balanced diet is one which

   a) Includes all the essential nutrients in the recommended quantities  
   b) Is eaten only by adults  
   c) Is very tasty  
   d) Is weighed accurately

(25) We should drink adequate water

   a) At regular intervals to stay alert  
   b) To prevent constipation, fatigue and irritability  
   c) For better health  
   d) All of the above are true

(26) We should cook food to

   a) Make it soft  
   b) To destroy and harmful organisms present  
   c) Make it easily digestible  
   d) All of the above

(27) The best method to cook rice and vegetables is

   a) To boil in water and throw away excess water  
   b) To pressure cook so that all nutrients are retained  
   c) To cook using more oil as it enhances taste  
   d) Any method that results in good taste

(28) We should always

   a) Wash the vegetables and then cut them  
   b) Use the skins of vegetables and fruits as far as possible  
   c) Cut the vegetables into medium size.  
   d) Follow all of the above
(29) To retain the nutrients while cooking, we should

a) Cover the vessel
b) Not use cooking soda
c) Discard excess water
d) Follow all of the above.

30) To maintain good health we should

a) Take nutritious food
b) Control body weight
c) Exercise regularly
d) Do all of the above.

FILL IN THE BLANKS

--------------------------------------can be prevented by regular and sufficient intake of water and fiber
--------------------------------------is a good source of iron
--------------------------------------provide essential fatty acids.
--------------------------------------vitamins are not stored in the body.
--------------------------------------act as scavengers by binding to the free radicals thus preventing them from causing damage

III STATE WHETHER TRUE OR FALSE.

1) Food cooked at home is always more nutritious than fast food or foods sold at roadside.
2) If our body weight is within the accepted standards it means that you’re getting proper nourishment.
3) Women in their child bearing years need more iron than men do.
4) Hunger and malnutrition affects students’ growth and learning.
5) The lack of certain nutrients in the diet can lead to diet related diseases.
6) Being underweight or overweight can lead to physical and emotional problems.
7) Sprouted pulses are rich in fiber, B complex vitamins and vitamin C.
8) Eating raw fruits and vegetables ensures adequate intake of
Vitamin C.

9) Three fourths of our body is made up of water.
10) Osteoporosis is preventable.
11) There is a close relationship between food intake and overall health.
12) A good breakfast is important for growing and learning.

**SCORING FOR THE QUESTIONNAIRE TO ASSESS KNOWLEDGE ON NUTRITION**

A questionnaire with objective type questions was designed to test the knowledge of adolescent girls regarding basic concepts of nutrition. Multiple choice questions, fill in the blanks and state whether true or false were included. The questions were based on the following concepts:

- Importance of food,
- Functions of nutrients
- Sources of nutrition
- Deficiencies
- Osteoporosis
- Weight management & BMI
- Cooking methods
- Vitamins

Level of knowledge was assessed depending on the number of correct responses given by the respondents. Each correct response was given one mark and the final score was computed.
Appendix-B 5
ATTITUDE SCALE ON REPRODUCTIVE HEALTH
(For both Pre-test and Post-test)

INSTRUCTIONS
Read the following instructions carefully before you begin to respond to the statements given in this scale.

1. Please note that there is no right or wrong answer.
2. To ensure confidentiality you need not sign or write your name.
3. Read each statement carefully and then answer by putting a tick against any of the five responses.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>SA</td>
<td>Agree</td>
<td>Not Sure</td>
<td>Disagree</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

NOTE: Please respond to all the statements because your responses are important.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>STATEMENTS</th>
<th>SA</th>
<th>A</th>
<th>NS</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Human sexuality develops over a period of time, ranging from early childhood to the adult years.</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2.</td>
<td>Sexual values and sexual responsibilities are individual decisions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
<td>Sexual relationships should be based on mutual trust, honesty, commitment and respect.</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4.</td>
<td>I feel uncomfortable to talk about sex.</td>
<td></td>
<td></td>
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<tr>
<td>5.</td>
<td>I am too embarrassed to ask my parents about sex.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td>The best way to learn about sex is to ask friends.</td>
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<tr>
<td>7.</td>
<td>Knowledge of sex will encourage experimentation.</td>
<td></td>
<td></td>
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<tr>
<td>8.</td>
<td>Young people involved in sexual relationships need access to information about health care services.</td>
<td></td>
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</tr>
<tr>
<td>9.</td>
<td>College students are too young to engage in sexual activity.</td>
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<tr>
<td>10.</td>
<td>Premature involvement in sexual behavior</td>
<td></td>
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</tr>
</tbody>
</table>

XXVII
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>11.</td>
<td>Menstruation is a normal process that each female experiences.</td>
</tr>
<tr>
<td>12.</td>
<td>Masturbation is harmful.</td>
</tr>
<tr>
<td>13.</td>
<td>Men are more sexual than women.</td>
</tr>
<tr>
<td>14.</td>
<td>Frequent pregnancies are harmful for the health of the mother.</td>
</tr>
<tr>
<td>15.</td>
<td>If a woman does not bear a male child, the fault is hers.</td>
</tr>
<tr>
<td>17.</td>
<td>Family planning should be made compulsory.</td>
</tr>
<tr>
<td>18.</td>
<td>Using contraception is a woman’s responsibility.</td>
</tr>
<tr>
<td>19.</td>
<td>Multiple partners should be avoided at all stages of life.</td>
</tr>
<tr>
<td>20.</td>
<td>It is all right for men to have sex before marriage but a woman should remain a virgin till marriage.</td>
</tr>
<tr>
<td>21.</td>
<td>Avoiding pre-marital sexual relationships gives maximum protection against all sexually transmitted diseases.</td>
</tr>
<tr>
<td>22.</td>
<td>Sexually transmitted diseases cannot be contracted by one sexual intercourse.</td>
</tr>
<tr>
<td>23.</td>
<td>AIDS (Acquired Immune Deficiency Syndrome) can be easily treated.</td>
</tr>
<tr>
<td>24.</td>
<td>Sexuality includes physical, ethical, spiritual, social, psychological and emotional dimensions.</td>
</tr>
<tr>
<td>25.</td>
<td>Sexual behavior must be responsible and self-disciplined.</td>
</tr>
<tr>
<td>26.</td>
<td>Concern and respect is important for sexual happiness.</td>
</tr>
<tr>
<td>27.</td>
<td>Sexuality is a natural and healthy part of living.</td>
</tr>
<tr>
<td>28.</td>
<td>All sexual decisions have effects or consequences.</td>
</tr>
<tr>
<td>29.</td>
<td>All persons have the right to make responsible sexual choices.</td>
</tr>
<tr>
<td>30.</td>
<td>Sexual relationships should never be coercive or exploitative.</td>
</tr>
<tr>
<td>31.</td>
<td>Individuals/society benefit when youngsters are able to discuss sexuality with their parents and/or other trusted adults.</td>
</tr>
<tr>
<td>32.</td>
<td>Abstinence ensures 100 percent protection from STDs.</td>
</tr>
<tr>
<td>33.</td>
<td>Birth control pills prevent STDs.</td>
</tr>
<tr>
<td>34.</td>
<td>Menstruation is a normal biological function to me.</td>
</tr>
<tr>
<td>35.</td>
<td>Menstruation makes me feel resentful about being a girl.</td>
</tr>
<tr>
<td>36.</td>
<td>Marriage provides social security, companionship and happiness.</td>
</tr>
<tr>
<td>37.</td>
<td>Marriage is mainly to satisfy sexual needs.</td>
</tr>
<tr>
<td>38.</td>
<td>Physical attraction is often mistaken as love by young people.</td>
</tr>
<tr>
<td>39.</td>
<td>Being in love means caring for each other with responsibility and commitment.</td>
</tr>
<tr>
<td>40.</td>
<td>Sex is the most intimate expression of love.</td>
</tr>
</tbody>
</table>
INSTRUCTIONS:

Read the instructions carefully before you begin answering each section.

NOTE: Please answer all the questions.

1. MULTIPLE CHOICES

Read each statement carefully and choose the most appropriate answer according to you. Please use a tick mark (✓) to indicate your response.

1. Delayed age at marriage helps in
   a) Increasing fertility rate
   b) Having fewer children
   c) Having many children

2. In India, the ratio of the number of females to the number of males is
   a) Equal
   b) Higher
   c) Lower

3. Literacy rate of females in India is
   a) Same as of males
   b) Higher than that of males
   c) Lower than that of males

4. The organ which supplies the foetus with oxygen and nutrition is the
   a) Umbilical cord
   b) Placenta
   c) Uterus
5. The foetus lives in this place which is filled with fluid and which acts as a cushion to protect it.

   a) Amniotic sac
   b) Placenta
   c) Uterus

6. The release of an ovum from the ovary is called as

   a) Fertilization
   b) Menstruation
   c) Ovulation

7. The ovaries are attached to the uterus by the

   a) Fallopian tubes
   b) Umbilical cords
   c) Tissues

8. The limbs, hands and feet of the foetus become fully developed by

   a) The end of the second month
   b) One month
   c) Fifth month

9. Waste products such as carbon dioxide and food wastes pass out of the foetal body into the mother's veins and out of her body through the

   a) Lungs and rectum respectively
   b) Intestines
   c) Umbilical cord

10. When the foetus has not developed correctly and the mother's body expels it long before the gestation period is over, this is called

   a) Delivery.
   b) Labour
   c) Miscarriage

11. The placenta is attached to the foetus by the:

   a) Fallopian tube
   b) Umbilical cord
   c) Cells
12. AIDS (Acquired Immuno-Deficiency Syndrome) is transmitted by:
   a) Body fluids like saliva and tears
   b) Sexual intercourse
   c) Heredity

13. AIDS first appeared as a problem only among homosexuals, but it is now a heterosexual problem
   a) True
   b) False
   c) Don't Know

14. AIDS is caused by a
   a) Bacteria
   b) Virus
   c) Don't know

15. AIDS can be cured if diagnosed in the early stages
   a) True
   b) False
   c) Don't know
II. MATCH THE FOLLOWING

Instruction: Select the term from Column B that is most appropriate to the phrase in Column A

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The event that occurs when a sperm penetrates and fuses with an egg</td>
<td>a) Labour</td>
</tr>
<tr>
<td>2. An unborn child developing in the uterus from the first to the 7th week of life</td>
<td>b) Newborn</td>
</tr>
<tr>
<td>3. The rope-like structure through which food and energy are carried from the mother to the unborn child.</td>
<td>c) Embryo</td>
</tr>
<tr>
<td>4. The network of blood vessels and tissues by which the unborn child is attached to the uterus.</td>
<td>d) Umbilical cord</td>
</tr>
<tr>
<td>5. The muscular contractions that expel a baby from the uterus.</td>
<td>e) Pregnancy</td>
</tr>
<tr>
<td>6. The baby after the umbilical cord is cut off to 27 days of life.</td>
<td>f) Placenta</td>
</tr>
<tr>
<td>7. The beginning of a new life resulting from the fusing of a sperm and ovum</td>
<td>g) Fertilization</td>
</tr>
</tbody>
</table>

III. Rate the following biological events in their order of occurrence in Adolescent females.

1. Growth of pubic hair
2. Oil and sweat glands get activated.
4. First menstrual period or menarche.
5. Growth spurt.
7. Completion of the growth of Uterus and Vagina.
8. Underarm hair and coarser body hair.
A questionnaire with objective type questions was designed to test the knowledge of adolescent girls regarding basic concepts of reproductive health. Multiple choice questions, questions on matching and sequencing were included. The questions were based on the following concepts:

- Population education
- Reproductive organs
- Puberty & menstruation
- Pregnancy & Conception
- HIV/AIDS

Level of knowledge was assessed depending on the number of correct responses given by the respondents. Each correct response was given one mark and the final score was computed.
Appendix-B 7

ATTITUDE SCALE ON LIFE SKILLS
(For both Pre-test and Post-test)

INSTRUCTIONS:
Read the following instructions carefully before you begin to respond to the statements given in this scale.
1. Please note that there is no right or wrong answer.
2. To ensure confidentiality you need not sign or write your name.
3. Read each statement carefully and then answer by putting a tick against any of the five responses.
   
<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
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</thead>
<tbody>
<tr>
<td>SA</td>
<td>A</td>
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<td></td>
<td>NS</td>
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<tr>
<td>D</td>
<td>SD</td>
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</tbody>
</table>

NOTE: Please respond to all the statements because your responses are important

<table>
<thead>
<tr>
<th>STATEMENTS</th>
<th>SA</th>
<th>A</th>
<th>NS</th>
<th>D</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I like myself the way I am.</td>
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<tr>
<td>2. I am a happy and carefree person.</td>
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<tr>
<td>3. I take good care of myself.</td>
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<td>4. I am comfortable being alone.</td>
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<td>5. I feel valued and needed.</td>
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<td>6. I deserve love and respect.</td>
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<td>7. I understand every one has their own problems.</td>
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<tr>
<td>8. I accept other people as they are and don’t expect them to change according to my wishes.</td>
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<tr>
<td>9. I respect other people’s opinions.</td>
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<tr>
<td>10. I show appreciation to others without difficulty.</td>
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<tr>
<td>11. I like to get involved in social service.</td>
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<tr>
<td>12. I believe I am a good listener.</td>
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<tr>
<td>13. I admit my mistakes openly.</td>
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<tr>
<td>14. I can accept criticism without feeling put down.</td>
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<tr>
<td>15. I always speak up for myself and put my views across.</td>
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</table>

XXXV
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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>16</td>
<td>I don’t worry about what others think of my views.</td>
</tr>
<tr>
<td>17</td>
<td>I enjoy socializing.</td>
</tr>
<tr>
<td>18</td>
<td>I make friends easily.</td>
</tr>
<tr>
<td>19</td>
<td>I enjoy a good relationship with my parents and siblings.</td>
</tr>
<tr>
<td>20</td>
<td>I can accept that other people have a right to think differently than I do.</td>
</tr>
<tr>
<td>21</td>
<td>I have a strong social support system consisting of family, friends and teachers.</td>
</tr>
<tr>
<td>22</td>
<td>I set daily goals and accomplish them.</td>
</tr>
<tr>
<td>23</td>
<td>I usually try to solve my problems.</td>
</tr>
<tr>
<td>24</td>
<td>When I am sick I work to get well soon.</td>
</tr>
<tr>
<td>25</td>
<td>I have good time management skills.</td>
</tr>
<tr>
<td>26</td>
<td>I am able to control stressful events and circumstances.</td>
</tr>
<tr>
<td>27</td>
<td>I eat well balanced meals.</td>
</tr>
<tr>
<td>28</td>
<td>I exercise enough to maintain a healthy body.</td>
</tr>
<tr>
<td>29</td>
<td>I enjoy making choices about life which are related to my education/health.</td>
</tr>
<tr>
<td>30</td>
<td>I usually weigh the advantages and disadvantages before taking important decisions.</td>
</tr>
<tr>
<td>31</td>
<td>I always consult my family members before making important decisions.</td>
</tr>
<tr>
<td>32</td>
<td>I like to dream.</td>
</tr>
<tr>
<td>33</td>
<td>I like to learn new things.</td>
</tr>
<tr>
<td>34</td>
<td>I think about the future and wonder about life.</td>
</tr>
<tr>
<td>35</td>
<td>I think of new ways to overcome boredom in life.</td>
</tr>
<tr>
<td>36</td>
<td>I actively take part in the extra curricular activities.</td>
</tr>
<tr>
<td>37</td>
<td>I know what is important to me.</td>
</tr>
<tr>
<td>38</td>
<td>I usually analyze my needs.</td>
</tr>
<tr>
<td>39</td>
<td>I can set my problems aside to accomplish critical tasks.</td>
</tr>
<tr>
<td>40</td>
<td>I don’t need other peoples’ approval to feel good.</td>
</tr>
<tr>
<td>41</td>
<td>I don’t hesitate to say ‘NO’ when I am put under pressure to do things I don’t want to</td>
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</tr>
<tr>
<td>42</td>
<td>When things go wrong, I accept responsibility for them.</td>
</tr>
<tr>
<td>43</td>
<td>I can control my emotions most of the time.</td>
</tr>
<tr>
<td>44</td>
<td>I can control my anger effectively.</td>
</tr>
<tr>
<td>45</td>
<td>I don’t worry unnecessarily.</td>
</tr>
<tr>
<td>46</td>
<td>I consider myself fortunate.</td>
</tr>
<tr>
<td>47</td>
<td>My eating habits are independent of my emotions.</td>
</tr>
<tr>
<td>48</td>
<td>I can adapt easily to new situations.</td>
</tr>
<tr>
<td>49</td>
<td>I practice Yoga/meditation/prayer regularly</td>
</tr>
<tr>
<td>50</td>
<td>I have hobbies which provide relaxation.</td>
</tr>
<tr>
<td>51</td>
<td>I listen to music to relieve stress.</td>
</tr>
<tr>
<td>52</td>
<td>In a crisis situation I seek help from others.</td>
</tr>
</tbody>
</table>
Appendix-C

CONSENT FORM FOR CONTROL GROUP

Dear student,

I am conducting a research study on “Communication Strategies for empowerment of adolescent girls towards life preparedness”. I would like to request your co-operation in this regard.

The research study will span for a period of six months, during which your knowledge and attitudes regarding Nutrition, Reproductive Health and Life skills will be assessed two times through questionnaires and attitude scales. I assure you that the information obtained will be kept confidential and will be used for academic purposes only.

Thanking you,

 MADHUMATHY. S.

I hereby give my consent to participate in the research study.

PARENT’S SIGNATURE
DATE:

STUDENT’S SIGNATURE
DATE:
CONSENT FORM FOR SELF-STUDY GROUP

Dear student,

I am conducting a research study on “Communication Strategies for empowerment of adolescent girls towards life preparedness”. I would like to request your co-operation in this regard.

The research study will span for a period of six months, during which your knowledge and attitudes regarding Nutrition, Reproductive Health and Life skills will be assessed through questionnaires and attitude scales. You will then be provided with self-study material which can be read at home. An assessment will again be made regarding knowledge and attitudes on Nutrition, Reproductive Health, and Life skills. I assure you that the information obtained will be kept confidential and will be used for academic purposes only.

The self-study material will be distributed free of cost. This will enrich your knowledge and enhance your coping skills and thereby prepare you better to face the challenges of life.

Thanking you,

MADHUMATHY. S.

I hereby give my consent to participate in the research study.

PARENT’S SIGNATURE
DATE:

STUDENT’S SIGNATURE
DATE:
CONSENT FORM FOR INTERACTIVE INTERVENTION GROUP

Dear student,

I am conducting a research study on “Communication Strategies for empowerment of adolescent girls towards life preparedness”. I would like to request your co-operation in this regard.

The research study will span for a period of six months, during which your knowledge and attitudes regarding Nutrition, Reproductive Health and Life skills will be assessed through questionnaires and attitude scales. You will then be provided with interactive intervention program with interesting activities. An assessment will again be made regarding knowledge and attitudes on Nutrition, Reproductive Health, and Life skills. I assure you that the information obtained will be kept confidential and will be used for academic purposes only.

The interactive intervention program will enrich your knowledge and enhance your coping skills and thereby prepare you better to face the challenges of life.

Thanking you,

MADHUMATHY. S.

I hereby give my consent to participate in the research study.

PARENT’S SIGNATURE
DATE:

STUDENT’S SIGNATURE
DATE:
Appendix-D1

UNITISATION OF LESSONS

NUTRITION

Importance of nutrition-Interrelationship of Nutrition and Health. Functions of nutrients, Sources and Deficiencies of nutrients.

Good food habits- Importance of food. Golden rules to healthy eating, Healthy Cooking methods

Healthy choices-Balanced Diet

Food hygiene-Effects of eating unhygienic, roadside foods

Importance of water-Functions, effects of deficiency, ORS

Weight management-BMI, physical exercises, Golden rules for weight control

Psychological function of food-Bingeing, fasting

Myths about food- Myths and Facts about food

Other Related Topics discussed - Osteoporosis, Synthetic Vitamins, Free radicals, Anti-oxidants, Endorphins.

REPRODUCTIVE HEALTH

Menstruation-Female reproductive organs, puberty, menstrual cycle, personal care during menstruation, Pre Menstrual Tension, Pregnancy & Conception.

Sexuality -Physical, Social, Emotional, Psychological and cultural aspects of sexuality.

Love and Marriage -Physical attraction, physical intimacy, dating, courtship, preparation for marriage.

Family planning- Population education, planned parenthood

Sexual relationships- Consequences of pre-marital relationships, Teenage pregnancies, Myths and Facts.

Access to information- Adolescent-Friendly Services in Bangalore City, Telephone Help lines, Importance of Social Support Systems.

Sexually Transmitted Diseases including HIV/AIDS- Types of STDs, HIV/AIDS awareness, Vulnerability of women, Risk factors.
LIFE SKILLS

Self-Awareness - Body image, Self Esteem, Social acceptance – Belonging, Civic Sense, Motivation
Empathy - Tolerance towards temperamental and cultural diversity
Effective Communication - Body language, assertive communication,
Interpersonal Relationships - Relationships with parents, peers, teachers and others
Problem solving - Facing Failures, Eve teasing, Time management, Sibling rivalry
Decision making - Risk taking, Personal responsibility
Creative thinking - Bringing novelty in life and relationships, developing creative pursuits.
Critical thinking - Peer Pressure, Television viewing, Substance abuse
Coping with emotions - Anger management, Expressing emotions, controlling negative emotions, Coping Strategies
Coping with stress - Preparing for examinations, Suicide prevention, Eustress Vs Distress.
## Appendix-D2

### DETAILS ABOUT THE COMMUNICATION STRATEGIES USED FOR THE INTERACTIVE INTERVENTION SESSIONS

<table>
<thead>
<tr>
<th>COURSE CONTENT</th>
<th>STRATEGIES USED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NUTRITION KNOWLEDGE &amp; ATTITUDES</strong></td>
<td></td>
</tr>
<tr>
<td>1. Importance of Nutrition</td>
<td>Poster competition</td>
</tr>
<tr>
<td></td>
<td>Peer education</td>
</tr>
<tr>
<td>2. Good food habits</td>
<td>Posters and charts</td>
</tr>
<tr>
<td>3. Healthy choices</td>
<td>Group activity</td>
</tr>
<tr>
<td>4. Food hygiene</td>
<td>Role play</td>
</tr>
<tr>
<td>5. Importance of water</td>
<td>Role play</td>
</tr>
<tr>
<td></td>
<td>Group discussion</td>
</tr>
<tr>
<td></td>
<td>Problem solving techniques</td>
</tr>
<tr>
<td>6. Weight management</td>
<td>Peer education</td>
</tr>
<tr>
<td></td>
<td>Demonstration</td>
</tr>
<tr>
<td></td>
<td>Posters, Calculation of BMI</td>
</tr>
<tr>
<td>7. Psychological function of food</td>
<td>Group discussion</td>
</tr>
<tr>
<td></td>
<td>Sharing of experiences</td>
</tr>
<tr>
<td></td>
<td>Activity</td>
</tr>
<tr>
<td>8. Myths about food</td>
<td>Games</td>
</tr>
<tr>
<td><strong>LIFE SKILLS EDUCATION</strong></td>
<td></td>
</tr>
<tr>
<td>9. Self-Awareness</td>
<td>SWOT analysis</td>
</tr>
<tr>
<td></td>
<td>Group counseling</td>
</tr>
<tr>
<td></td>
<td>Assignments</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
</tr>
<tr>
<td></td>
<td>Resource Person</td>
</tr>
<tr>
<td>10. Empathy</td>
<td>Narratives/Stories</td>
</tr>
<tr>
<td>11. Effective communication</td>
<td>Chinese whisper</td>
</tr>
<tr>
<td></td>
<td>Demonstrations of assertive body language</td>
</tr>
<tr>
<td></td>
<td>Role play</td>
</tr>
<tr>
<td>12. Inter-personal Relationships</td>
<td>Sharing of experiences</td>
</tr>
<tr>
<td></td>
<td>Role play</td>
</tr>
<tr>
<td></td>
<td>Peer education</td>
</tr>
<tr>
<td>13. Problem Solving</td>
<td>Brain storming</td>
</tr>
<tr>
<td>14. Decision Making</td>
<td>Role play</td>
</tr>
<tr>
<td></td>
<td>Group discussion</td>
</tr>
<tr>
<td></td>
<td>Paper and pencil activity</td>
</tr>
<tr>
<td>15. Creative thinking</td>
<td>Resource person</td>
</tr>
<tr>
<td></td>
<td>Activities</td>
</tr>
<tr>
<td>16. Critical thinking</td>
<td>Case studies</td>
</tr>
<tr>
<td>Topic</td>
<td>Activities</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>17. Coping with emotions</td>
<td>Resource person Activities</td>
</tr>
<tr>
<td>18. Coping with stress</td>
<td>Peer education Demonsnations of relaxation techniques</td>
</tr>
<tr>
<td><strong>REPRODUCTIVE HEALTH KNOWLEDGE &amp; ATTITUDES</strong></td>
<td></td>
</tr>
<tr>
<td>19. Menstruation</td>
<td>Flip chart, poster, leaflet Resource person, paper pencil activity</td>
</tr>
<tr>
<td>21. Sexuality</td>
<td>Illustrations, Newspaper clippings group discussions, question box</td>
</tr>
<tr>
<td>22. Love and Marriage</td>
<td>Group discussion, role plays</td>
</tr>
<tr>
<td>23. Family planning</td>
<td>Pamphlets, question &amp; answer session, Resource person</td>
</tr>
<tr>
<td>24. Sexual relationships</td>
<td>Case studies, pamphlets Peer educator</td>
</tr>
<tr>
<td>25. Access to information</td>
<td>Pamphlet, group counseling</td>
</tr>
<tr>
<td>26. STD’s and AIDS</td>
<td>Charts, posters, pamphlets, games, activities Resource persons</td>
</tr>
</tbody>
</table>
Appendix-D3

The respondents of the Experimental Group I received the interactive intervention program. It spanned for a period of six months starting from September 2005 to April 2006. The breakup of the sessions was as follows:

**PROGRAM SCHEDULE**

<table>
<thead>
<tr>
<th>Date Range</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-9-2005</td>
<td>Formal launching of the program</td>
</tr>
<tr>
<td>9-9-2005 to 10-11-2005</td>
<td>Individual sessions</td>
</tr>
</tbody>
</table>
| 11-11-2005 to 31-12-2005 | Counseling  
                      | Value clarifications                                       |
| 1-1-2006 to 31-1-2006 | Planning for the workshop                                   |
| 1-2-2006 to 28-2-2006 | Planning for the health exhibition  
                      | Concept of peer education club                             |
| 1-3-2006 to 8-3-2006 | Preparations for the workshop  
                      | Developing the logo for the peer education club             |
| 9-3-2006 to 11-3-2006 | Workshop                                                     |
| 12-3-2006 to 31-3-2006 | Preparation of display aids for Health Exhibition            |
| 1-4-2006 to 6-4-2006 | Preparing the layout of the exhibition  
                      | Publicity Organizing                                        |
| 7-4-2006            | Health exhibition  
                      | Launching of the peer educators' club                       |
Compact disk (CD) containing interactive intervention package and self study material
Appendix-E

List of Resource Persons

- Dr. Nasira Baig, Head of the Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Shobha. G, Senior scale Lecturer, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Venkat Lakshmi. H. Lecturer, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Indiramma. B.S, Lecturer, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Anuradha. S, Consultant gynecologist, Bangalore.

List of Peer Educators

- Ms. Minal Rukhana, Research scholar, Department of Food and Nutrition, Smt. VHD Central Institute of Home Science, Bangalore.
- Ms. Vineetha. R, Research scholar, Department of Food and Nutrition, Smt. VHD Central Institute of Home Science, Bangalore.
- Ms. Ayesha, Department of Human Resources, INFOSYS, Bangalore.
- Ms. Charlene, Lecturer, Department of Home Science, Mount Carmel College, Bangalore.
Appendix- F

THE CONCEPT OF PEER EDUCATION CLUBS
A peer education club provides a common platform where adolescent girls come together and share their views and ambitions. Opportunities for free expression of their talents, creativity and an offer of a perfect setting for delivering counseling and guidance services are some of the highlights of such clubs. Training for enhancing knowledge and skills of the peer educators will be held regularly by utilizing voluntary services from professionals. The areas included in the training program should be need based. Training for peer educators includes short intensive training workshops and refresher courses. There is a critical need to provide the peer educators with opportunities for growth, development and renewal. Peer educators must be recruited as resources for the future and there is a need to plan for successors. Interactive communication strategies like lectures, debates, quiz programs, role plays, games, paper and pencil activities, group discussions, projects, leaflets, posters, analysis of newspaper reports and question and answer sessions could be used for the training. The peer education club is a practical approach which can be started by committed individuals in their neighborhood or by teachers in schools and colleges.

The concept of establishing a peer education club was visualized while reviewing literature on programming for adolescent health and development by WHO. Important principles as outlined by WHO which were considered for the establishment of peer education club are:

- Active involvement of adolescents in planning, implementing and evaluation.
- Enlisting the active participation of adolescents to enhance research and programming outcomes.
- The greater the role of adolescents in actually developing and managing the projects, the greater the benefits and successes.
- The program should focus on approaches that deal with factors which predispose adolescents to engage in high-risk or problem behaviors.

These factors include low self-esteem, underdeveloped interpersonal and decision making skills, lack of interest in education, inadequate information on nutrition and health, low perception of opportunities, the absence of dependable and close human relationships and meager incentives for delaying short-term gratification.
Group discussion in progress for designing of logo for Peer Education club

Designing of the Peer education club logo in progress
The researcher visualized the establishment of a peer education club as a guidance service as well as a networking and support system for the student population at Smt. VHD Central Institute of Home Science, Bangalore. The mission of this club is to empower adolescent girls in life preparedness. The club has a vision to render guidance as a preventive measure and as a supportive measure to adolescent girls through peer educators. This was also a communication strategy in the research program for the interactive intervention group.

Aim
The aim of the peer education club is to empower adolescent girls to apply knowledge and develop attitudes and skills to make positive decisions and take actions to promote and protect one's health and the health of their peers.

Objectives
The objectives of the peer education club are as follows:

- To equip club members with knowledge, attitudes and skills required for healthy living.
- To promote active participation of club members, parents, teachers, health professionals and other community members for the cause of health education.
- To provide opportunities for club members and their peers to recognize and value individual skills and enhance self-esteem.
- To promote tolerance and understanding of peers and their needs.
- To provide social support for the club members and their peers.

Peer Educators
The respondents of Experimental Group I formed the first batch of peer educators. Subsequent batches will be enlisted on a voluntary basis. They were assigned specific tasks to perform. They focused on peer-led group education activities aimed at small target groups and also the community at large.

Barriers encountered
Some of the barriers encountered during the implementation of the program were as follows:

- Insufficient coordination in terms of time frames and plans.
- Insufficient infrastructure
- Lack of genuine commitment and coordination from members.
Peer education club logo designed by respondents of Experimental Group I
Conclusion
An adolescent participation philosophy does not negate the vital role of adults in the programming for adolescents. It promotes equal opportunities for adolescents and adults with an appropriate distribution of labour and responsibilities based on aptitude, training and experience necessary for various programming tasks. Adolescents’ participation does not mean that adults give up their share of responsibility for programming, but they accept the challenges of adult-adolescent collaboration. It also means that adults contribute lessons of experience and accept that their viewpoints may be questioned. Adolescent participation can benefit from the guidance, training, supervision and encouragement offered by adults in each stage of implementation.
Appendix-G

The following evaluation checklist was used for the three pronged evaluation of the interactive intervention by the respondents, peer observers and staff observers. Copies of these evaluation checklists were distributed after each session to obtain immediate feedback. They permit a quick response and provide the researcher with information about the progress of the program.

EVALUATION CHECKLIST

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>PARTICULARS</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Was the purpose of the presentation clear?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Did the participants show enthusiasm to learn and practice?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Was the presentation well planned?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Was the information accurate?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Were the key points highlighted?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Were relevant educational materials used?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Did the educational aids supplement the presentation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Were participatory teaching and learning methods used?</td>
<td></td>
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<tr>
<td>9.</td>
<td>Did the resource person show adequate preparation?</td>
<td></td>
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</tr>
<tr>
<td>10.</td>
<td>Did the resource person review key points?</td>
<td></td>
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</tr>
<tr>
<td>11.</td>
<td>Did the resource person keep checking to see if the participants understood the presentation?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Did the participants ask questions?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Did the participants' questions indicate that they would try to practice the skills?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Was there a mix of knowledge, attitude and skills in the presentation?</td>
<td></td>
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<tr>
<td>15.</td>
<td>Were the participants satisfied with the implementation of the programme?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Do you think the presentation will influence the behaviour of participants in a positive manner?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any other comments or suggestions:
List of Staff observers

- Dr. Roopa. K.S, Professor, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Rajalakshmi. M. S, Selection Grade Lecturer, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Shobha. G, Senior scale Lecturer, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Venkat Lakshmi. H, Lecturer, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Dr. Indiramma. B.S, Lecturer, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.

List of Peer observers

- Ms. Sheetal, Post graduate student, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
- Ms. Veena, Post graduate student, Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore.
Appendix - 1

CONFERENCES/ SEMINARS / WORKSHOPS ATTENDED RELATED TO RESEARCH TOPIC


2. UGC Sponsored three day Workshop for teachers, on “Career Orientation- A Personality Development Approach” organized by the Maharani’s Arts College for Women, Bangalore on 19th to 21st August 2004.

3. XXXVI Annual Meet of the Nutrition Society of India organized by the Department of Studies in Food Science and Nutrition of the University of Mysore, CFTRI&DFRL, Mysore on 5th &6th November 2004.


5. XXVI Biennial Conference of Home Science Association of India held from 27th to 29th December 2005 at Pune.


7. Southern Regional Consultation Meet on “Adolescent Guidance Services” on 22nd and 23rd March 2006 held at National Institute of Public Cooperation and Child Development, Southern Regional Centre, Bangalore.

PAPERS PRESENTED AT CONFERENCES AND SEMINARS ON THE RESEARCH TOPIC

1. Presented a paper titled “Attitudes of adolescent girls towards Life Skills” at the XXVI Biennial Conference of Home Science Association of India held from 27th to 29th December 2005 at Pune.

2. Poster presentation titled “Attitudes of adolescent girls towards Reproductive Health” at the XXVI Biennial Conference of Home Science Association of India held from 27th to 29th December 2005 at Pune. This Poster was adjudged ‘Best Poster’ in Human Development.


5. Presented a paper titled “Assessment of adolescent girls’ attitudes towards life skills and reproductive health” at the National conference “Adolecon 2006” organized by the Indian Association of Pediatrics at the NIMHANS convention center, Bangalore on 23rd and 24th September 2006.

PUBLICATIONS
OUTREACH LECTURES DELIVERED BASED ON RESEARCH TOPIC

1. Delivered an interactive lecture on “Nutrition & Health care of Adolescents, Chronic Energy Deficiency in adolescents and Women - its prevention and control” on 8th October 2003 for 15 participants comprising of CDPO’s/ ACDPO’s/Senior Supervisors from Women & Child Welfare Department as part of the Training of Trainers Programme organized by Food & Nutrition Board at kendriya Sadan, Bangalore.

2. Delivered an interactive lecture on “Nutrition & Health care of Adolescents, Chronic Energy Deficiency in adolescents and Women - its prevention and control” on 14th October 2003 for 15 participants comprising of CDPO’s / ACDPO’s /Senior Supervisors from Women & Child Welfare Department as part of the Training of Trainers Programme organized by Food & Nutrition Board at Kendriya Sadan, Bangalore.


4. Delivered an interactive lecture on “Adolescent Sexuality and Reproductive Health” as part of the two day symposium on ‘Adolescence and Youth’ organized by the Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore on 3rd April 2004.

5. Delivered an interactive lecture on “Health and Nutritional care of Pregnant and Lactating Women, Prevention and Management of LBW babies” on 27th October 2004 for 15 participants comprising of CDPO’s/ ACDPO’s/Senior Supervisors from Women & Child Welfare Department as part of the Training of Trainers Programme organized by Food & Nutrition Board at kendriya Sadan, Bangalore.
6. Was invited by Fulfilling Peoples’ Aspirations, India to conduct an interactive session on ‘leadership skills’ for peer educators on 16th October 2005 at their Bangalore centre.


8. Delivered an interactive lecture on “Adolescent Sexuality” as part of the two day symposium on ‘Adolescence and Youth’ organized by the Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore on 25th April 2006.

9. Was invited as a resource person to address the participants of “Training of District Level Core Teams under Kishori Shakti Yojana” held at National Institute of Public Cooperation and Child Development, Southern Regional Centre, Bangalore. Delivered an interactive lecture on “Fact sheet of being an adolescent girl” on 3rd July 2006 for the participants comprising of CDPO’s/ACDPO’s/Senior Supervisors and medical officers.

10. Was invited by Fulfilling Peoples’ Aspirations, India to conduct an interactive session on life skills, leadership skills, self and personality development for peer educators on 12th August 2006 at The Corporation Girls Junior College, Devaiah Park, Bangalore.

11. Delivered an interactive lecture on “Parenting Styles” as part of the seminar on “Preparation for Parenthood and Parenting Patterns Today” organized by the Department of Human Development, Smt. VHD Central Institute of Home Science, Bangalore on 18th August 2006.

12. Was invited by Fulfilling Peoples’ Aspirations, India to conduct an interactive session on ‘sexual abuse’ for peer educators on 19th August 2006 at The Corporation Girls Junior College, Devaiah Park, Bangalore.

13. Was invited to conduct an interactive session on “Adolescent Sexuality” for 60 adolescent girls studying in Government Pre-
University College for girls, Malleshwaram, Bangalore, on 22nd Jan 2007 as part of a HIV/AIDS awareness programme.

14. Was invited to conduct an interactive session on “Adolescent Sexuality” for 60 adolescent girls studying in Government Independent Pre-University College, Hoskote on 27th Jan 2007 as part of a HIV/AIDS awareness programme.

15. Was invited to conduct an interactive session on “Life Skills Education” for 80 adolescent girls of Sumangali Seva ashrama, Bangalore, on 21st February 2007 as part of an awareness programme for adolescents.

16. Was invited to conduct an interactive session on “Self Awareness” as part of “Influence of emotional intelligence program on holistic life approach among adolescents” for 40 adolescent girls and boys of Thirumala Vidyaniketan, Bangalore, on 3rd April 2007.

17. Was invited to conduct an interactive session on “Assertive Communication” as part of a workshop on emotional intelligence for 40 adolescent girls and boys of Thirumala Vidyaniketan, Bangalore, on 7th April 2007.

TRAINING PROGRAMS UNDERGONE TO GAIN INSIGHT FOR RESEARCH DESIGN

1. Completed the training program in student’s counseling for college teachers conducted by the National Institute of Mental Health and Neuro Sciences, Bangalore from 11th November 2002 to 30th November 2002.

2. Completed a six-month certificate course in ‘Life Skills Education’ conducted by the Centre for Education Beyond Curriculum at Christ College, Bangalore from September 2002 to February 2003.

3. Completed the First Degree Level of ‘Reiki Natural Healing’ course on 14th June 2005 in Bangalore.
Appendix - J

**Statistical Methods:** Student t test (two tailed, dependent) has been used to find the significant mean scores of study parameters between Pre and Post intervention. Analysis of Variance has been used to find the significance of outcome between three groups. Effect size has been computed to find the effect of intervention on study parameters in three groups.

1. t-test for two population means (method of paired comparisons)

Objective: To investigate the significance of the difference between two population means. No assumption is made about the population variances

\[ t = \frac{(\bar{x}_1 - \bar{x}_2)}{s / \sqrt{n}} \]

where \( s = \sqrt{\frac{\sum (d_i - \bar{d})^2}{n - 1}} \)

and \( d_i \) is the difference formed for each pair of observations


Objective: To test the hypothesis that K samples from K Populations with the same mean.

Limitations: It is assumed that populations are normally distributed and have equal variance. It is also assumed that samples are independent of each other.

Method. Let the \( j^{th} \) sample contain \( n_j \) elements (\( j=1,2,...K \)). Then the total number of elements is

\[ N = \sum n_j \]

\[ \bar{x}_j = \frac{\sum n_j \bar{x}_{ij}}{n_j} \]

\[ S_i^2 = \frac{\sum \sum (x_{1i} - \bar{x}_j)^2}{N - K} \]

\[ S_2^2 = \frac{n_j (\bar{x}_j - \bar{x})^2}{K - 1} \]

\[ F = S_2^2 / S_1^2 \] Which follows F distribution (K-1, N-K)

3. Effect Size

\[ d = \frac{\text{mean1} - \text{mean2}}{\text{PooledSD}} \]
4. Classification of Effect size

<table>
<thead>
<tr>
<th>Effect Level</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>No effect</td>
<td>$d&lt;0.20$</td>
</tr>
<tr>
<td>Mild effect</td>
<td>$0.20 &lt; d &lt; 0.50$</td>
</tr>
<tr>
<td>Moderate effect</td>
<td>$0.50 &lt; d &lt; 0.80$</td>
</tr>
<tr>
<td>Large effect</td>
<td>$0.80 &lt; d &lt; 1.20$</td>
</tr>
<tr>
<td>Large effect</td>
<td>$d &gt; 1.20$</td>
</tr>
</tbody>
</table>

5. Significant figures

+ Suggestive significance $0.05 < P < 0.10$
* Moderately significant $0.01 < P \leq 0.05$
** Strongly significant $P \leq 0.01$

**Statistical software:** The Statistical software namely SPSS 11.0, Stata 8.0, Systat 11.0 and Effect Size calculator were used for the analysis of the data and Microsoft word and Excel have been used to generate graphs, tables etc.

**References:**
M. Venkataswamy Reddy (2002), Statistics for Mental Health Care Research, NIMHANS publication, INDIA

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