

III. RESEARCH METHODOLOGY

The study “**Adolescents of Arunthathiyar population – An exploratory study**” had been formulated with the following steps to venture into the research study:

- A. Research Design
- B. Population and sampling
- C. Construction and selection of tools
- D. Conduct of the study
- E. Analysis of the data

A. RESEARCH DESIGN

Kerlinger (1986) rightly says the Research Design is a holistic plan to answer the research problems. As the present study was carried out with the key objective of exploring the various underlying causative factors related to the education, nutritional status and mental health of the adolescents in Arunthathiyar population; and for the reason that is a new study and the topic of interest remains to be studied in detail, “Community based Cross – Sectional Study using the Exploratory Survey Design” was chosen, as this design offers flexibility and scope to probe into many different aspects of the problem so as to consolidate, analyse, integrate and interpret the findings into a meaningful discussion. Exploratory research also helps to develop, refine and test measurement tools and or procedures.

A few studies on Arunthathiyars in general have dealt with the status of socio economic and cultural aspects, discrimination and victimization of Arunthathiyars. However the present study was intended to study the repercussion of those aspects on adolescents, the building blocks to construct a new society of their choice. The following were some of the reasons for opting this particular study

- Collection of available literature to formulate workable hypothesis, and identify important variables for the study.
- To visit areas and get first hand experience of their life styles, living conditions and understand in total the status of Arunthathiyars.

- To explore and associate the various factors those influences/debilitates the education performance, nutritional status and mental health status of the adolescents.

B. POPULATION AND SAMPLING

Sampling may be defined as the selection of some part of the universe or population on the basis of which a judgement or inference about the aggregate is made (Choudhary, 1991). When selecting a sampling strategy it is necessary that it fits the purpose of the study, the resources available, the question being asked and the constraints being faced. This holds true for sampling strategy as well as sample size. As far as this study is concerned, there is very limited literature available, hence it was felt necessary to understand in detail the socio cultural, economic and occupational back ground of the population and its repercussions on adolescents. The technique of multistage sampling was chosen, as this method was considered to be the best choice to select the sample required for the study. The sampling process involved seven stages, and the details were presented as follows:

Stage I : Selection of four out of 32 districts from all the four regions of Tamil Nadu

Stage II : Selection of the study district

Stage III: Selection of five taluks for the baseline survey

Stage IV: Selection of the study taluk

Stage V: Selection of six villages from all the four regions of the study taluk

Stage VI: Selection of adolescents

Stage VII: Selection of experimental group

The Figure–2 elaborately captures the seven stages of multistage sampling, the number of districts and its geographical location, the aspects considered for the selection of the study district, taluk and the villages.

MULTISTAGE SAMPLING

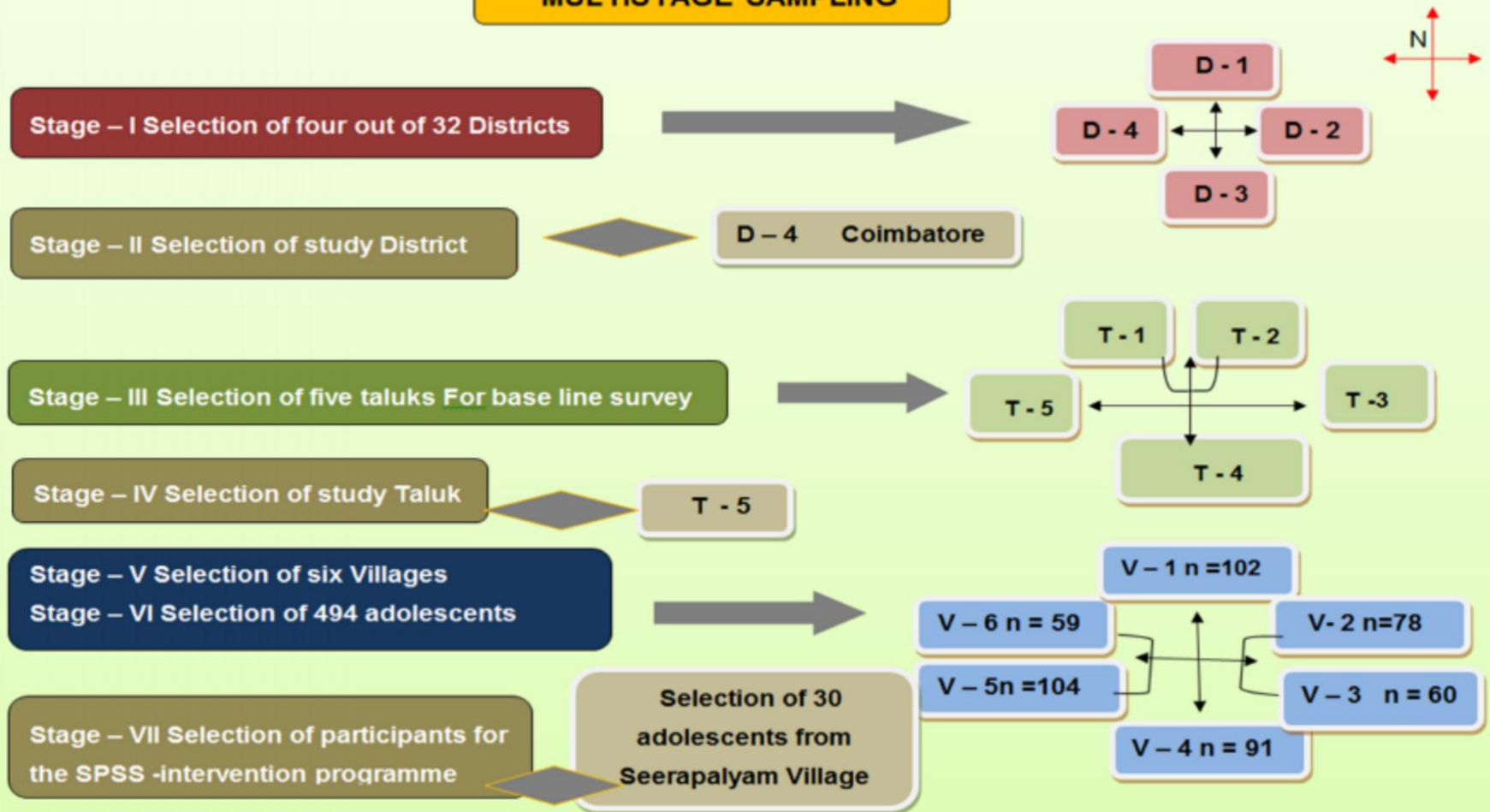


FIGURE – 2

Stage I: Selection of four out of 32 districts from all the four regions of Tamil Nadu

The districts from north, south, east and west regions of Tamil Nadu were totally considered for the study, accounting to 32 districts. While the western and northern districts have a high Arunthathiyar population, the southern and eastern regions on the contrary are the least populated. Although the location and population of the Arunthathiyars may vary, the nature of the problems, the struggles and the coping patterns of the Arunthathiyars remains the same, except for the degree of variance. Considering the homogeneity of the population, the following four districts from all the four regions were chosen using the lottery method. The selected districts with the population details was given in the Table – II

TABLE – II

DISTRICTS SELECTED AND ITS DEMOGRAPHIC DETAILS

S.No	Name of the District	Region	Population
1.	Coimbatore	West	4,15,991
2.	Erode	North	2,94,080
3.	Cuddalore	East	14,756
4.	Ramanathapuram	South	24, 398

***(Source census of India – 2001)**

The details of Arunthathiyar's life and their socio- economic, cultural status were collated through available literature and naturalistic observation. The first hand experience visiting the colonies, interaction with people and observation helped towards a better understanding of their life styles, their physical and social environment, and their moods and emotions. The visit during their festival to a village in Annur has given a picture of their generous hospitality, and made the investigator realise the importance given to culture and socialization. Visits to schools in Cuddalore, Sathyamangalam and Coimbatore have shown the interest of the school head and the team, towards student's welfare and academic progress. In Cuddalore, the youth in a small hamlet are well aware of the three per cent inner reservation for Arunthathiyars and most of the youth are

qualified graduates in English literature and other subjects from Annamalai University.

Stage II: Selection of the study district

The study district that was selected out of the above four districts was Coimbatore. It was selected for one of the major reason that it has got the high Arunthathiyar population. Mahar (2009) specifies that the Paraiyans and the Pallans of the Scheduled Castes are spread out in the southern states, while the Arunthathiyars are largely in Coimbatore district. Coimbatore is the administrative head of the district. It is one of the most industrialized districts and a major textile, industrial, commercial, educational, information technology, healthcare and manufacturing hub of Tamil Nadu. The region is bounded by Tiruppur district in the east, Nilgiris district in the north, Erode district in the north-east, and Dindigul a District in the south east respectively. Coimbatore is the third largest city in Tamil Nadu, with total Arunthathiyar population of 4,15,991 (Census of India, 2001). The other reasons for opting Coimbatore for the study apart from the population was that the Arunthathiyars were:

- a. High risk prone occupation
- b. Access to a wide range of job opportunities and
- c. Live a socially secluded and discriminatory life

a) High risk prone occupation

In Coimbatore city the Arunthathiyars are mainly employed in City Corporation either as permanent employees or on temporary daily wage basis. They are the main crusaders and ambassadors of cleanliness. They are everywhere in the city, offices, institutions, railway stations, bus terminals and many other places with a broom and basket. While they care for the safety of the general public, they themselves are devoid of many basic facilities like sanitation, water and toilets. Although In many places where they have been living in urban slums (heart of the city) for years, the occupants were not given ownership the document called "Patta". Hence they might have to vacate and find new place to occupy. The places they live are cubicles and have a common

toilet (one for 500 families). On an average the house is 10 feet in breadth and 16 feet in length, that lodges 4 – 5 members.

b) Access to a wide range of job opportunities

Coimbatore city has a wide range of occupations and openings, unlike other districts where the occupations are area specific, which is mostly daily wage work in agriculture. Since, many of the men and women are skilled in some vocation or the other. It is up to the Arunthathiyars to find a suitable occupation for their livelihood. Yet the children do not have a proper place for their study time in their houses and the streets are just pathways. Often when they have some functions or the other, the speakers are played loud which is quite noisy and disturbing. Weekends are particularly most disturbing, as the people get drunk and succumb to fights.

c) Live a socially secluded and discriminatory life

The rural life also has its own challenges for the Arunthathiyars. They live in a separate colony outside towards the edge of the village. Government builds most of their houses, they are also provisioned with water and electricity. The local government allocates fund for construction of toilets to individual houses. Yet the discrimination and social seclusion continues at both the village and the work place. The adolescents feel that it is in some way affects their psychological well-being. The 'tag' Arunthathiyar is a social stigma and a brand for the public to offer their sceptical look. Some of them say that they don't care about the upper caste attitude. The Arunthathiyars are not allowed in the temples, and they have their own deity and a place of worship. The local person from their community would be the priest. It was also observed that some of them visit the Church, as they feel emotionally better and peaceful.

The past association with local women activists, local NGO's who are working with Arunthathiyars, and also identifying local volunteers – such as school teachers, youth, women leaders, has helped the investigator get introduced to the communities. It is also that the researcher's past four decades of rural development experience as a social scientist had facilitated her relate with people at ease. The Arunthathiyars are being easily cheated by strangers

with false promises such as mobilization of government programmes, chit funds etc., therefore winning the people's trust was very important. The information thus collected was very useful in framing the questions and construction of the tools.

Stage – III: Selection of five taluks for baseline survey

The taluks selected were, Annur, North Coimbatore, Madukkarai, Mettupalyam and Pollachi. The Arunthathiyar adolescent population in these taluks were 2048, 1958, 4820, 2000 and 1700 respectively (door to door survey by Vizhuthugal, 2010). A total of 626 adolescents (5% of the adolescent population from each of the taluk) in the age group 11 – 19 years were selected at random for the baseline survey to understand the life style of the adolescents, their families and the culture practices observed.

Stage IV: Selection of the study taluk

A small taluk but with dense and high population of 4820 adolescents was chosen for a detailed study. The other reasons for selecting this taluk was i) it was the only taluk that was not bordered by other districts of the state ii) to avoid socio cultural influences of the neighbouring district ii) willingness of the adolescents to participate in the study iii) voluntary support from parents and the local women leaders to permit the adolescents to partake in the study and also organize them in a convenient place

Stage – V: Selection of six villages from all the four regions

The study taluk is one with a dense Arunthathiyar population of 49,843 (Census of India, 2011). This taluk is close to Coimbatore city and all its villages are within a radius of 5–15 kms. This taluk has 17 villages and out of which six interior villages away from Coimbatore city were chosen randomly from all the four regions. The main reason for selecting the interior villages was to avoid the urban influence. The following Table - III gives the picture of the list of villages identified and its geographical location:

TABLE – III**LIST OF VILLAGES AND ITS GEOGRAPHICAL LOCATION**

S.No	Name of the village	Region	Total Arunthathiyar population	Adolescent population selected
1.	Seerapalyam	North	519	102
2.	Othakalmandapam	East	397	78
3.	Arasipalyam	East	306	60
4.	Valukkuparai	South	458	91
5.	Pitchnur	West	525	104
6.	Madukkarai	West	301	59
	Total		2560	494

Stage VI: Selection of adolescents

Out of 4820 Arunthathiyar adolescents' population in the taluk, 494 from six villages in the age group 1 – 19 years were selected for the study at random. The number of boys was 242 and the girls 252. The number selected were ten percent of the total Arunthathiyar adolescent population of the taluk. The adolescents readiness to participate, their parents willingness and volunteers support to gather adolescents in a common place, were most encouraging factors for the study.

Stage VII: Selection of experimental group

. The selection of 30 adolescents was from the most interior villages of the study taluk for the intervention programme (SPSS – Sensitization to Problems and Seek Solutions). A few villages were visited to discuss with parents and women leaders about the plan to conduct the programme. Most of them were hesitant, since on holidays girls go to work as part time labourers, boys organise sports events, and some parents also want their children to help them. Finally an NGO who worked earlier in those villages were approached, having felt the importance of the programme they agreed to organize the adolescents.

Therefore 30 adolescents most willing and interested were selected with their parents' consent.

Ethical consideration

The application form explaining the design and the protocols used in the research study was subjected to the Institutional Human Ethics Committee (IHEC) and the clearance was obtained. The approval number for the study was AUW / IHEC / HD-17-18/XPD/32. The clearance certificate issued by the Human Ethical Committee is furnished as Appendix – I

The local women group leaders, village representatives in each of the five taluks and the villages were met and their permission was taken to carry out the study. For the detailed study in the selected taluk, a written consent was obtained from the volunteer who had good reputation and recognition and represented the entire taluk.

3. CONSTRUCTION AND SELECTION OF TOOLS

As the literature available was scarce, the direct interaction with the community and past knowledge working with the Arunthathiyar women activists helped to consolidate the information in formulating tools. As discussed in sampling stage I, the visits to the four districts formed the base for the construction of the tools, and in the stage III, the visits to five taluks further helped in refining the tools constructed. The process of chiselling the formats to the desired and final shape was thus elaborated:

i) Interview schedule for Baseline survey

A structured interview schedule was prepared to elicit general, familial and economic profile, and cultural practices observed among the Arunthathiyars. The tool prepared was reviewed by experts from the Department of Economics, Resource Management, Extension and Community Development, Food Science and Nutrition and Human Development. The suggestions offered by the experts helped in including important questions, and also reframing the questions. The schedule was pilot tested with 150 adolescents from all the five Taluks. In each taluk 30 adolescents were

interviewed and the responses that were collected helped in content validation and fine tuning the schedule.

Initially the investigator was reluctant to put certain questions pertaining to socio - economic situation to the adolescents. However, from the dialogue that went on in the families and the village scenario, where most of the women openly discussed about the loans and dues to be repaid etc. Therefore it was evident that the children were well aware of the family problems. The financial status was all known to the adolescents as they see the day to day realities that were all transparent and open in their small habitat. The details related to socio – economic position were collected from the adolescents itself; the younger adolescents had their mothers available to clarify doubts if any. The interview schedule thus prepared was used to carry out base line survey in five taluks (Appendix – II)

ii) Questionnaire to elicit general profile in the study taluk

A questionnaire was prepared to collect details pertaining to personal and family profile, socio – economic back ground, family and school environment, environment, neighbourhood, community and the locale. This tool was used for the detailed study of adolescents in the selected taluk.

As the majority of the adolescents pursue their studies in Tamil medium. The questionnaire was translated into the regional language (Tamil), with the support of experts in the language. A pilot study was conducted in the study Taluk with 30 adolescents to check on its face value for reliability. It was found that the questionnaire was well received by the students the tool used was given as Appendix – III.

Reliability

The questionnaire was also tested for reliability using parallel method, the test value was found to be 0.81. The tool was therefore assessed to be reliable to carry out the study.

iii) Five point scale to assess adolescent's perceptions on socio - economic status

Based on the observation and statements made by the adolescents and parents during visits to the districts, a five point scale was developed to assess the adolescents perceptions on their social status, rated as strongly agree, agree, uncertain, disagree and strongly disagree. The scale had 40 statements. Care was taken to see that the statements were mediocre in leverage and did not directly relate to the individual sentiments. The statements were generalized and covered all aspects related to caste, income, occupation, living conditions, education and their image as projected by the government, politicians, immediate and larger society. The tool was reviewed by experts in Psychology and also in the Indian Institute of Management (IIM) Bangalore.

The tool was pilot tested with 15 adolescents in Madukkarai taluq which helped in paraphrasing, deleting / substituting the statements. The final tool was substantiated with 20 statements that include ten negative and ten positive statements. The statements were rated 5,4,3,2 and 1, with 'strongly agree' scoring 5 and "strongly disagree" being rated 1 for positive statements. It is the reverse for the negative statements. Professionals and experts in language then translated the tool into Tamil. The final tool thus developed was given in Appendix – IV.

The scores in the attitudinal scale with a maximum of 100 to a minimum of 20 placed the respondents in a position relative to one another. The classification of the level of perceptions on their social states was given in the Table - IV

TABLE - IV

LEVEL OF PERCEPTION OF ADOLESCENTS ON THEIR SOCIAL STATUS

Level of perception	Range of scores
Very Low	0 – 19
Low	20 – 39
Moderate	40 – 59
High	60 – 79
Very High	80>

iv) Likert's scale to assess academic performance

Majority of the adolescents were studying in Government schools. The academic performance of the annual exams was collected from the report cards. The grades were assigned as Poor, Good, Very Good, Excellent and these were equated with the total percentage of marks. Poor scored > 40 marks; Good was between 41–59 marks, V. Good had marks between 60–79 and excellent scored 80 and above. Most of the students were in high school and higher secondary and their marks sheet of the final exam was available. The four point rating scale was given as Appendix - V.

v) Depression Anxiety and Stress Scale (DASS)

The only standardised tool selected for the present study was DASS (Depression, Anxiety and Stress Scale). Depression and anxiety were recognized as common, serious disorders and weakening mental health problems in the changing social context among adolescents and student population are afflicted largely (Andrews and Wilding, 2004). Lifetime prevalence increases drastically, from the age of 12 years to the end of adolescence. DASS with 42 items was the tool selected for the study as Taylor et al., (2005) found the tool to be reliable and valid among clinical and nonclinical population and different cultural and ethnic groups.

The DASS was a standardized tool with 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety and stress. Each of the three scales comprised of 14 items, divided into subscales of 2-5 items with similar content. The Depression scale assesses hopelessness, devaluation of life, self-deprecation, lack of interest/involvement and inertia. The Anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale was sensitive to levels of chronic non-specific arousal. It assessed difficulty in relaxing, nervous arousal, and being easily upset/agitated, irritable / over-reactive and impatient. The tool was presented in Appendix- VI.

Respondents were asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. Scores of Depression, Anxiety and Stress are calculated by summing up the scores for the relevant items. The Table - V presents the three aspects of mental health and the scale items

TABLE - V
ASPECTS OF MENTAL HEALTH AND SCALE ITEMS

Mental health aspect	Number of statements in the scale	Scale items
Depression	14	3, 5, 10, 13, 16, 17, 21, 24, 26, 31, 34, 37, 38, 42.
Anxiety	14	2, 4, 7, 9, 15, 19, 20, 23, 25, 28, 30, 36, 40, 41.
Stress	14	1, 6, 8, 11, 12, 14, 18, 22, 27, 29, 32, 33, 35, 39.

The score for each of the respondents over each of the sub - scales, were then evaluated as per the severity-rating index presented in the Table – VI below.

TABLE - VI
DASS SEVERITY RATING INDEX

	Depression	Anxiety	Stress
Normal	0 – 9	0 – 7	0 – 14
Mild	10 – 13	8 – 9	15 – 18
Moderate	14 – 20	10 – 14	19 – 25
Severe	21 – 27	15 – 19	26 – 33
Extremely Severe	28+	20+	34+

Reference: Lovibond, S., H., Lovibond, P., F. (1995)

The tool selected was translated into Tamil by experts and ensured that the meaning of the statements was in coherence with the English format. The scale was also pilot tested to see if the adolescents could comprehend without difficulty.

vi) Assessment of nutritional status of adolescents through Body Mass Index (BMI)

Gorstein (1988) stated, that anthropometry was used for body measurements to assess nutritional and health status of an individual and population groups. Anthropometry although is less accurate as compared to clinical and biochemical techniques, it is most convenient, least expensive and could be used when limited resources were available. Anthropometry is especially important during adolescence as it allows the monitoring and evaluation of the hormone mediated changes in growth and maturation during the period. Moreover, because growth may be sensitive to nutritional deficit and surfeit, adolescent anthropometry provides indicators of nutritional status and health risk and may be diagnostic of obesity (WHO, 1995).

a) Measurement of height

Height of an individual has been considered as a principal measure of skeletal bone tissue. Standing height is the measurement of the maximum distance from the floor to the highest point on the head; the subject is facing directly ahead, when the measurement was made. Care was taken to see if the foot wear was off, feet together, arms by the sides, and the heels, buttocks and upper back in contact with the wall. Height in centimetres was recorded for the identified sample.

b) Measurement of weight

Bamji et al (2005) recognised body weight as the most widely used and simplest reproducible anthropometric measurement for the evolution of nutritional status. To record the body weight measurement, the subject was made to stand with minimal movement, with hands by their side, without footwear. Weight was recorded to the nearest 0.1 kg using the manually adjustable weighing machine.

c) Body Mass Index (BMI)

BMI – Body mass Index is a simple index of weight for height and was commonly used to classify underweight, over weight and obesity (WHO, 2004). The BMI (also called Quetlet index) was calculated by dividing the subject’s weight in kilograms by the square of his / her height in meters (Garrow and Webster, 1985). The classification of the scores on BMI with that of the nutritional status of adolescents as given by NIN was used for the current research and was detailed in Table – VII.

TABLE - VII
CLASSIFICATION OF BMI

Scores	Classification
< 5 th Percentile	Under Nutrition
≥ 5 th – 85 th Percentile	Normal
≥ 85 th – 95 th Percentile	Overweight
≥ 95 th Percentile	Obesity

Ref – NIN (National Institute of Nutrition)

vii) Rating scale to adjudge the knowledge and skills

A rating scale was developed to covering the knowledge and skills that an adolescent should focus in the education, personal life and nutrition domain. The details of the rating scales are presented as follows:

- The first was related to strengths in education with ten statements. The five point rating scale was rated as ‘never’, ‘rarely’, ‘sometime’, ‘frequently’ and ‘always’ to adjudge the level of knowledge and skills posed in the field of education. The minimum score was 10 and the maximum was 50
- The second scale was on strengths in personal life which also had ten statements, rated as ‘never’, ‘rarely’, ‘sometime’, ‘frequently’ and ‘always’ to adjudge the level of knowledge and skills they posses towards the betterment of their personal life. The minimum score was 10 and the maximum was 50 and

- The third rating scale was related to nutrition and had 15 statements , that comprised of eight negative and seven positive statements, and was rated on a five point rating scale as ‘strongly agree’, ‘agree’, ‘uncertain’, ‘disagree and’ ‘strongly disagree’. The positive statements ‘strongly agree’ was rated 5 and the ‘strongly disagree’ was ‘1’, the negative statements were reverse scored. The aggregate scores were 15 as the minimum and 75 as the maximum.

All the three components as a single rating scale was administered to the group of experimental sample just before the defined SPSS intervention. The same tool was again administered to them after three weeks of completion of the programme. The three weeks gap was to help the adolescents imbibe the values of SPSS intervention and to check on their rating capacity.

The difference of scores from pre and post signified the efficacy of the SPSS programme to check on their retaining capacity in Appendix – VII.

D. CONDUCT OF THE STUDY

The study was conducted in four phases, the first phase was the conduction of base line survey in five taluks, the second was the preparation phase for a detailed study in the selected taluk, the third phase was the participation of adolescents in the selected taluk, and the fourth was the sensitization phase. The details of the four phases was elaborated as follows

Phase – I : Baseline survey

The Arunthathiyar community though was hassle free and not so difficult to approach the phase of establishing rapport to win their trust was a difficult task. The visits to the villages were made in advance and before the adolescents arrived from schools. The parents and family members were met and given a brief introduction of the study. Their quench to curiosity and benefits of the survey were patiently answered. Also the investigator made a huge effort to spend time with the adolescents of Arunthathiyar population after their school hours to build a good rapport and observe their activities. The confidence building with the family members was the most important aspect and that helped in allowing their children to participate in the study. Thus the required data was collected from 626 adolescents (5 % from each of the five taluk's Arunthathiyar adolescent population) for the baseline survey. Since these communities were all homogenous in nature, in terms of their socio-economic back ground and cultural lifestyles, the hamlets/villages close to one another in the taluk were visited and the adolescents who were willing and available at that point of time were interviewed to collect the details.

Phase – II: Preparation for the detailed study in the selected taluk

The detailed study was conducted in the selected taluk. Considering the time required for answering a number of inventories, rating scales, and questionnaire and also undertaking the anthropometric measurements, the study was initiated with the process of identifying a local volunteer with minimum qualification and from the same community. The criteria for the selection were:

- i) Experience having worked with the community in the identified Taluk
- ii) Accepted as people's representative

One such person was identified with the help of a NGO, as she had worked in various assignments given by them, and the government departments. The need for a local volunteer was felt most needed for two reasons. One was that approaching the communities directly was rather difficult, as they were very sceptical to the amount of detailed information to be collected, due to their past negative experiences with outsiders. The second reason was to manage the respondents, in terms of queuing them up for anthropometric measurements and data entry.

The volunteer was then oriented with the purpose of the study, the details of the questionnaire and all other tools, its relevance, importance and the approximate time that would be taken to complete each of them. At that instance she suggested translation of the entire set of tools into the regional language, for the convenience of the adolescents. Accordingly, the translations were carried out, and a pilot study was done as already mentioned in the construction of tools. It was ensured that the adolescents could comprehend the contents without much difficulty, and thus the entire process took nearly three months.

Later, together the plan was chalked out in relation to the selection of villages in the selected taluk and the schedule of the visits to the villages in the selected taluk to carry out the data collection. Six interior villages, distant from the city environment from all the four regions of the taluk were chosen for the study.

Phase – III: Participation of adolescents in the selected taluk

At the village level the investigator was introduced to other women leaders or the elected PRI (Panchayat Raj Institution) by the volunteer. Rapport was built, their doubts were cleared, and questions related to the benefits of the study were answered. After the entire process, they made arrangements to gather the adolescents in a common place. In some of the villages the youth themselves would volunteer and collected the beneficiaries. Wherever needed, the parents too were approached, their permission was sought to send their child / children to participate in the study.

The convenient time to collect data was in the evenings after the students returned from their school; the holidays were more suitable as they were available for the study the whole day. A place that was available and suitable was chosen for the adolescents to assemble, was either a community hall, open place, or the local school. Whenever, the school authorities were approached for permission to conduct the study, they were very much obliged and readily offered a separate class room after the school hours to conduct the study.

Once the students assembled, they were oriented with the research concept, the details of the various inventories, rating scales and the anthropometric measurements to be taken. The students settled down, the tools were administered, they were asked not to discuss their doubts with the friends, rather clarify with the researcher or the volunteer, and the details of the study were as follows:

a. Questionnaire to elicit general profile in the study taluk

The questionnaire focussed on general, family profile, socio economic and familial back ground, details of home / school environment, neighbourhood and the locale was used for the detailed study of adolescents in the selected taluk. After the adolescents settled down, the questions and the proposed responses were read and explained, the process helped them to provide the required data.

b. Five point scale to assess adolescent's perceptions on socio - economic status

The instructions were read to the respondents and explained, they were encouraged to read the statements, understand and mark the relevant response in the five point scale. The exercise was completed over a period of eight to ten minutes. The filled in format was rechecked to find gaps if any, if it was so, the respondents were asked to complete the same.

c. Depression, Anxiety and Stress Scale (DASS)

The instructions were read and the doubts of the respondents were cleared. Since the scale was also translated into Tamil using simple easy to

understand words. The respondents were asked to read the statements one by one and mark on the 4 - point severity / frequency scales to rate the extent to which they have experienced over the past week

d. Likert's scale for academic achievement:

The data was collected after the completion of the annual exams. Since 73 per cent of the respondents were from high school and higher secondary school, after the results of 10th and 12th class they had obtained their mark sheets. The respondents from other classes had their report cards, answer papers of the academic year with them. This helped them to readily calculate the aggregate and convert that into percentages.

e. Anthropometric measurements

The necessary equipment – Standard weighing machine, non-stretchable measuring tape, a pencil and a metal scale was carried to the village, to take weight and measure height. After completion of filling all the formats, the respondents were lined up to take the measurements. While the researcher took the measurements, the volunteer or one of the respondents entered the measurements in the columns provided.

The Plate-I consolidates details of the survey with photographs of respondents in their village set up, the volunteers who supported to organise the adolescents for the data collection and taking anthropometric measurements.

DATA COLLECTION IN THE VILLAGE OF THE SELECTED TALUK



Respondents filling the questionnaire



PLATE - I

Phase – IV: Intervention programme - Sensitization to Problems for Seeking Solutions (SPSS) - Intervention programme for the adolescents

The intervention programme phase had three sub phases and was as follows:

Sub phase – I: Pre test data collection

Sub phase – II: Planning and execution of SPSS

Sub phase – III: Post test data collection

Sub phase – I: Pre test data collection

The questionnaire was prepared to measure the skills acquired and knowledge gained on the aspects related to education, personal life and nutrition. The questionnaire comprised of details on personal back ground. The three five point rating scales, related to three aspects of well being. The first rating scale had a set of ten statements, focussed on adolescent's strengths in education – regularity / punctuality to school, completion of assignments / home work willing to learn and share knowledge, fulfilment of teacher's expectancy, preparation for exams and future plans. The second rating scale also had ten statements related to their strengths in personal life – personal grooming, care of family members and cleanliness of surrounding, developing skills and hobbies, relaxation and entertainment, and state of healthy relationship with family members and friends.

The third rating scale had 15 statements related to concept of health, nutrition, food groups, nature of foods (organic / inorganic), and methods of cooking. The questionnaire was given to the participants prior to the awareness programme as pre test. The statements in each of the rating scale was read and explained, the respondents took 15 minutes to complete the pre test. The first exercise of filling the pre test helped them to complete the post test faster and in 10 minutes.

Sub phase – II: Planning and execution

The three day intervention programme was designed after a good understanding of the problems of adolescents related to education, personal life style and dietary habits / intake that contributed to their wellbeing. However, it was found that during weekends and holidays the male adolescents were occupied in sports, and the female adolescents took to part time jobs to earn their pocket money. Adolescents who were in the village were expected to help their mothers in domestic chores, therefore it was found difficult to organize the adolescents for the three day programme.

The NGO who worked earlier in the area was then approached, the details of the programme were discussed with the team, and they agreed to organize the adolescents. With the help of the NGO and the local ICDS (Integrated Rural Development Services) centre in charge, the three day intervention programme was arranged in the interior village of the selected taluk.

The content of the intervention programme was therefore focussed on importance of education, problems encountered, possible solutions and need for immediate and future plans in educational perusal. The second aspect was personal life, the contents were related to importance of family, community and friends, development of healthy relationships, hobbies, management of time and money, relaxation to lessen the burden of personal problems. The third aspect was diet, and the main problem was that of mothers leaving early to work and unable to cook breakfast or morning food for the family. Related to this problem, recipes with locally available, low cost easy to prepare, raw, partly cooked and uncooked nutritious food items was demonstrated.

The three day programme started with orientation, self introductions and ice breaking exercises. As the adolescents were not used to sit for long hours, and had moderate concentration, the programme planned was participative in nature. The detailed three day programme was organized as per the schedule Appendix - VIII

Sub phase – III: Post test data collection

The evaluation was basically to adjudge the efficacy of the SPSS programme in terms of the skills acquired and knowledge gained. The rating scale used as pre test was used as post test. This was administered to the same group of adolescents after a gap of three weeks, during which the adolescents would have practiced the skills in planning and executing their school work, as well as in preparing their food. The pre and post test scores were statistically analysed to find the efficacy of the programme.

6. ANALYSIS OF DATA

The data collected was coded, consolidated and statistically analysed. The main tests applied were percentiles, chi square, correlation and paired t' test to analyse the data. Percentiles were used to sketch the socio – economic and cultural profiles of Arunthathiyars in the five taluks. The general profile of adolescents in the five taluks and problems related to their education was presented in percentiles and discussed. Percentile analyses were also used to portray the general profile of adolescents and family profile in the selected taluk.

The detailed study in the selected taluk with 494 adolescents focused on the three main aspects namely academic achievement, nutritional status and mental health and its associated factors. Chi square test was used to associate these aspects with variables such as age, gender, type of school, family, and parent's education their occupation and the family income.

The perceptions of adolescents of their socio – economic status were measured by the scores in the five point rating scale and categorised as 'very low', 'low', 'moderate,' 'high' and 'very high'. The scores were also correlated with academic achievement, nutritional status and mental health to find out its influence on these aspects.

The efficacy of the SPSS intervention programme was studied; the three aspects covered in the programme were education, personal life and nutrition. These aspects had three different scales, the statements in each of the scales were rated separately and the consolidated scores from pre and post test was analysed with paired 't' test to adjudge the efficacy of the programme.

METHODOLOGY AT A GLANCE

1. Identification of sample

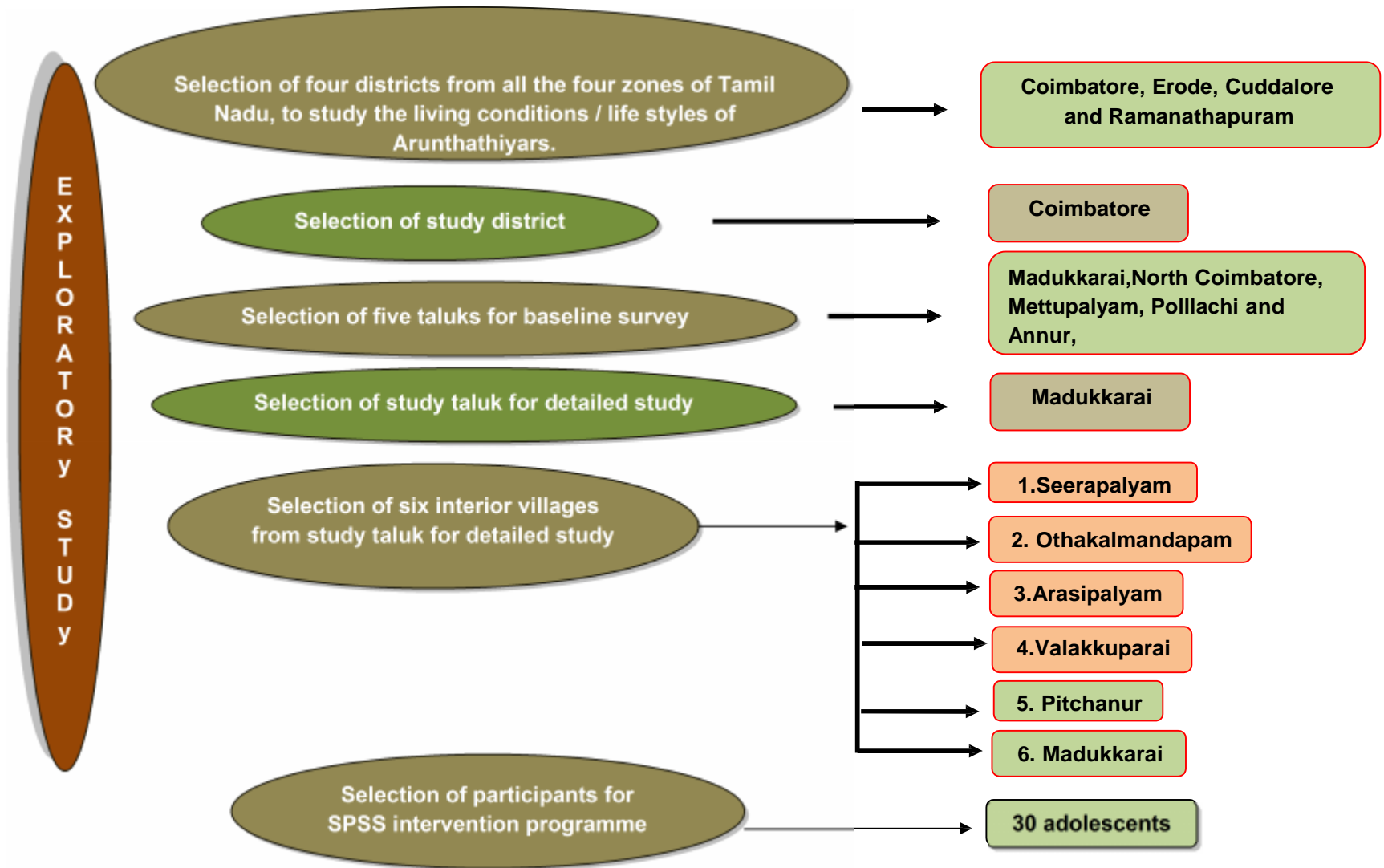


FIGURE 3

Contd...

2. TOOLS USED

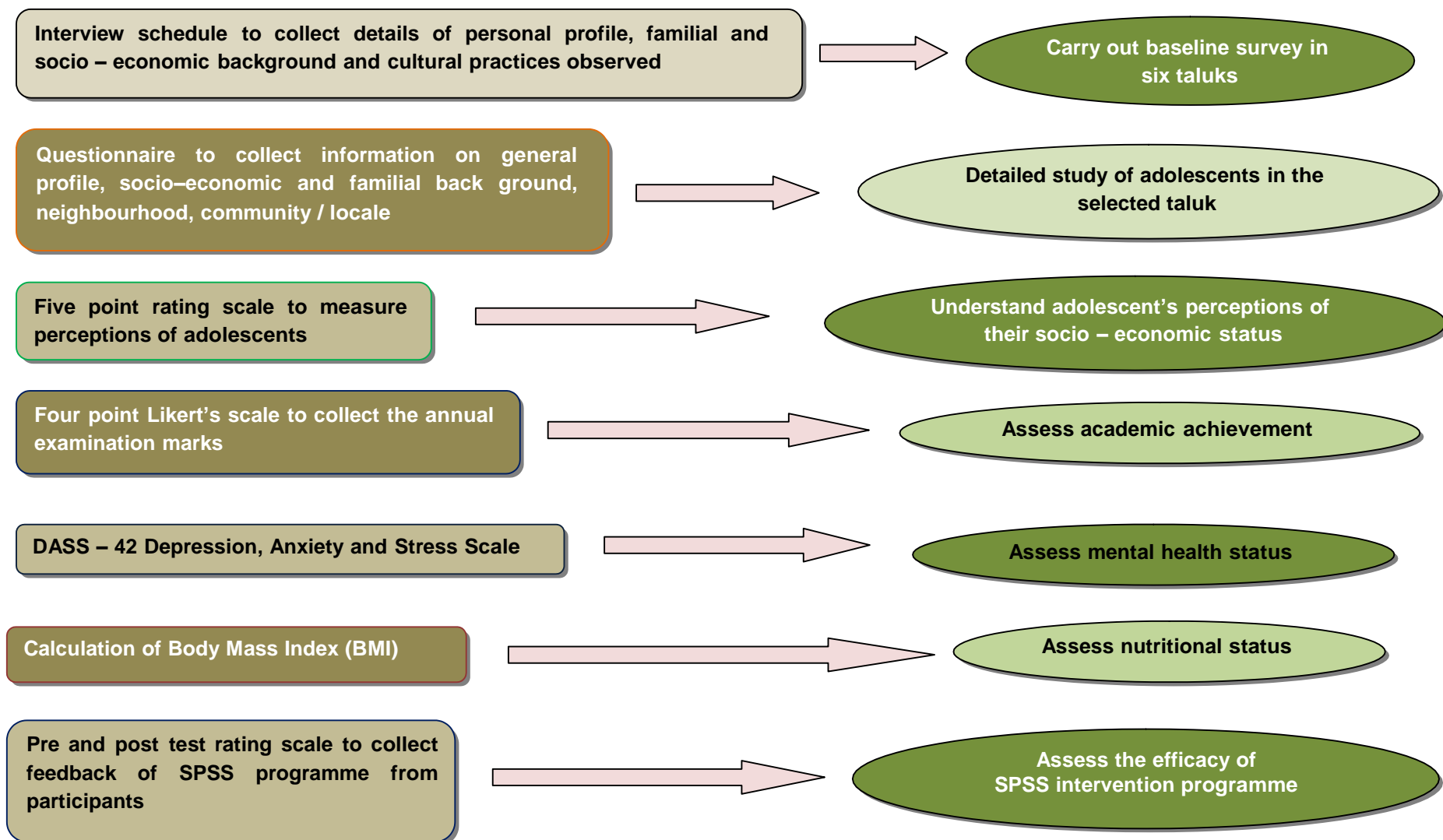
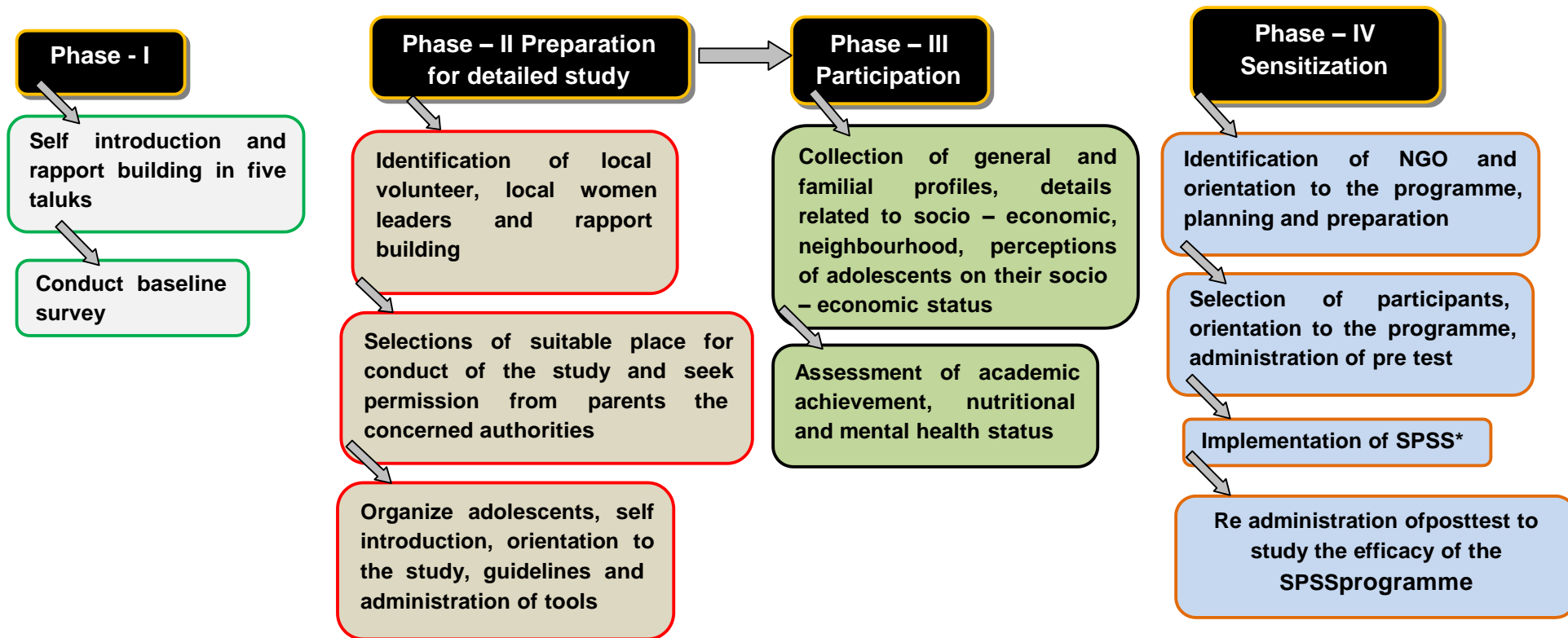


FIGURE 3

Contd...

3. Conduct of the study



***SPSS – Sensitization of Problems to Seek Solutions was a three day intervention programme to 30 adolescents in the interior village of the study taluk. The subjects covered were education, personal life and nutrition.**

FIGURE 3