CHAPTER-V

SUMMARY AND CONCLUSION

Adolescence represents a window of opportunity to prepare for a healthy adult life. This period is identified with rapid changes in the physical, social, emotional and mental development. The issues related to female adolescent health need to be viewed not only from the point of view of the adolescent herself, but also from the point of adolescent perspective of intergenerational health and development. Their health plays an important role in determining the health and development of future population since, they are considered to be potential mothers and future home makers. Existing literature on adolescent nutrition and health status shows a discouraging scenario.

Realizing this situation, they are being addressed in the Integrated Child Development Services (ICDS). It plays a nodal role for the advancement of women and children through implementation of certain innovative programmes. One such component for improving the status of the health of the adolescent girls has been included in the scheme since, 2000-01 all over the country.

Hence, the present study has been undertaken to investigate how the programme has empowered the beneficiaries regarding nutrition and health status, the role of Anganwadi workers in delivering the services to the adolescent girls, the constraints faced by them and the strengths and weaknesses of the programme. The present study entitled “Impact of Strengthening the ICDS Adolescent Nutrition and Health Education Component and Its Delivery” was taken up. The present chapter summarizes the findings and presents the conclusions arrived at.
Methodology of the Study

The study has been carried out in Athoor block of Dindigul District, Tamilnadu. Dindigul district comprises 14 blocks. Athoor is one among them. There are 146 centres in Athoor block, among them 100 have been selected for the study. The Anganwadi workers are responsible for delivering the nutrition and health education to the adolescent beneficiaries. Totally one hundred Anganwadi workers and three hundred and fifty adolescent beneficiaries were selected randomly.

Interview schedule was the tool used in the present study. Two separate tools were constructed to elicit information from the Anganwadi workers as well as the adolescent beneficiaries.

Interview schedule - I was used to collect data from the Anganwadi workers regarding socio-economic profile, nutrition and health education delivery, the level of knowledge on nutrition, and health and informations relevant to NHEd aspects.

Interview schedule - II was used to collect the data from the selected adolescent beneficiaries regarding their socio-economic profile, Anthropometric measurements, Biochemical-haemoglobin analysis, clinical assessment for deficiency diseases, dietary practices, knowledge, attitude and practices on nutrition and health and opinion towards the NHEd delivery by the Anganwadi workers.

The same tools and methods were used during post-survey to find out the impact of education intervention given by the investigator on the nutrition and health knowledge and delivery of the component. Adolescent beneficiaries were also assessed after eight months interval to study the effect of the education intervention provided by the Anganwadi workers.
Education intervention was given only to the Anganwadi workers and after intervention the Anganwadi workers were asked to disseminate the knowledge on nutrition and health in such a way to improve the beneficiaries’ knowledge, attitude and practice on nutrition and health.

Statistical measures like averages, t-test, correlation and chi-square were used to analyse and interpret the findings.

Data analysis was carried out using SPSS package version (10.0) and statistical test like simple tabular analysis and analysis of variance were carried out.

### Major Findings of the Study

> Among the selected 100 Anganwadi workers, 72 per cent of them were between 41 to 50 years of age, 10 per cent were between 30 to 40 years and 18 per cent were above 51 years.

> Majority (75%) had completed SSLC and that is the minimum educational qualification and 12 per cent of them had education higher than the prescribed level.

> Majority of them were Hindus (88%), followed by ten per cent of them were Christians and two per cent were Muslims. Seventy three per cent of them belonged to backward community followed by most backward community (12%), scheduled caste (9%) and forward community (6%).

> Majority of the Anganwadi workers were married (87%) and belonged to nuclear families (79%). Most of the Anganwadi workers (68%) had 5 to 6 members in their family.

> Sixty six per cent of the Anganwadi workers were residing in the same village and the rest thirty four per cent of them were residing in different nearby villages.
48 per cent of them had more than 21 years of experience and very few (4%) had less than ten years of experience.

Nearly half (49%) of the Anganwadi workers had monthly income between Rs. 2001/- and 5000/-. 

Majority of the Anganwadi workers (94%) conducted Nutrition and Health Education sessions in the Anganwadi centre itself. Four per cent of the Anganwadi workers conducted NHEd sessions in the schools, one per cent in the community hall and rest, and one per cent conducted at the temple.

Forty nine per cent of them conducted NHEd sessions for half an hour to one hour, 44 per cent of them conducted for more than one hour followed by seven per cent conducted for less than half an hour.

Eighty seven percent of them conducted NHEd sessions once in a month as per the ICDS norms. A very few per cent reported that once in fifteen days (9%) followed by thrice in a month (4%).

Lecture, demonstration, drama and puppet show were the methods used for delivering NHEd sessions. Booklets and charts were found to be used by the maximum number of Anganwadi workers.

Only half of the Anganwadi workers reported that they underwent training in the area of nutrition and health education.

Before intervention, the Anganwadi workers showed poor knowledge in six NHEd topics.

Majority of the Anganwadi workers viewed that the involvement of SHGs,(77) and NGOs (69) were not essential. But the Anganwadi workers (100) felt that involvement of beneficiaries’ parents were considered as essential. Only 7 percent of the NGOs were involved in conducting NHEd and 51 per cent of the parents were encouraging their daughters to participate in NHEd.
The problems faced by the Anganwadi workers in conducting NHEd were lack of learning materials (42%), lack of suitable teaching aids (69%), lack of cooperation from adolescent beneficiaries’ families (52%) and only eleven per cent of them were not having any such problems.

Cooperation from project functionaries such as project officer, zonal officer, Community Nutrition Instructors, supervisors (100%), cooperation from helpers (91%) were the factors perceived as strengths in conducting NHEd, Twenty eight percent of them reported that lack of initiative by the Anganwadi workers was one of the weakening factors in service delivery.

The impact of intervention on overall knowledge on nutrition and health education topics showed significant improvement. Cent percent score was gained on the topic diarrhoea and higher on scores personal hygiene and environmental sanitation. Iodine deficiency disorder and breastfeeding and weaning foods were also revealed a high level of knowledge gained by the Anganwadi workers.

Majority of the Anganwadi workers (78%) conducted NHEd for more than one hour after intervention.

Among the methods, majority of them used demonstration (69%) and participatory methods (68%) and in the case of teaching aids a higher percentage of them used booklets (89%) followed by charts (80%).

Findings related to adolescent respondents

Half of the selected respondents (51%) belonged to the age range of 14 to 16 years, followed by 27 per cent in the age between 16 and 18 years and 22 per cent were in the age range to 11 to 12 years.
Among the selected adolescent respondents 38 per cent of them were in high school and a very few three percent were doing basic degree / diploma at the time of survey and 17 per cent of them were school drop outs. Among them five per cent were at middle school level and the rest 12 per cent were at the primary level.

Poverty (38%) was the reason for their dropping out followed by household chores (28%), not interested in studies (21%), education in considered as not important (7%), religious reasons (5%) and lack of transport (3%).

Majority of the respondents were Hindus (82%) followed by Christians (11%) and the rest (7%) were Muslims.

More than half of them (57%) belonged to Backward Community followed by 27 per cent of them were Scheduled Caste and 16 per cent of them Denotified Community / Most Backward Class.

Three-fourth (75%) of them belonged to nuclear family and the rest twenty five per cent belonged to joint family system.

Majority of the parents were daily wage earners and mainly involved in agricultural work and majority (71%) of the fathers were coolies and their mothers (14%) were daily wage-earners and two percent were government employees.

Forty percent of family’s monthly income range was Rs. 1001 to Rs. 3001/- and 17 per cent had monthly income of less than Rs. 1000/-.

Anthropometric measurements like height and weight of the selected adolescent respondents were less than NCHS standards in all the ages before and after intervention.
> Before intervention. Body Mass Index of the selected respondents showed that 24 per cent of them were under CED grade I mild and three per cent of them were under CED grade II moderate. Thirty one per cent of them were found to be normal and few (4%) of them were overweight. After intervention, there was no difference in both height and weight measurements and changes in grades of BMI.

> Seventeen per cent of them in the age group of 13 to 15 years and sixteen per cent in the age group of 16 to 18 years were moderately anemic. Only Twenty four per cent had normal haemoglobin level before intervention. After intervention, a shift from the moderate to mild form of anemia observed in the age group of 13 to 15 years aged respondents than the other two age groups.

> The clinical symptoms showed that one fourth of the respondents (23%) had pale nails, and nine per cent of them had bleeding gums. After intervention, iron deficiency symptoms such as pale face, and pale nails were reduced when compared to the pre-survey data.

> Majority of the respondents were non-vegetarians (88%), 7% were vegetarians and 5 per cent were ova-vegetarians. More than three fourth of the respondents (86%) consumed three meals a day and ten per cent of them had two meals a day.

> Rice was consumed by all the respondents (100%) daily, along with red gram dhal. Consumption of protein-rich and protective foods like milk, flesh food, fruits and green leafy vegetables, were found to be meager and very rare.

> Majority of the respondents (75%) consumed tea or coffee and 11 per cent consumed milk as such daily. The consumption of flesh foods were observed in half of the respondents (56%). All the respondents used refined sugar and oil daily.
The results of twenty-four-hour dietary recall method showed that the mean intake of all the selected nutrients were less than the RDA for 16-18 years age group and 13 to 15 years age group, and in 10 to 12 years age group, calories, protein, (3-carotene intake was higher than the RDA. There was no difference seen between before and after intervention in the age group of 10 to 12 years and 16 to 18 years.

Data related to menarche showed that, among 350 selected adolescent respondents. Majority (60%) of them attained puberty in the age between 13 and 14 years and a few percent (2%) in the age of 15 years.

Half of the respondents had normal bleeding 31 per cent reported stomach pain/menstrual cramps and few percent reported of heavy bleeding (8%), scanty bleeding (6%) headache (5%) and vomiting (1%).

Knowledge on nutrition and health aspects of the adolescent respondents before and after intervention showed that the ratio of poor scores in pre-survey was reduced. A remarkable shift to poor to average was seen after intervention.

Unfavourable attitudes were seen towards the nutrition related items when compared to health statements. After intervention, favourable attitude was seen higher both in health and nutrition statements.

Before and after intervention practices on nutrition were poor. Regarding health remarkable changes were observed after intervention. After intervention favourable responses were increased considerably for NHEd statement delivery system.

The impact of intervention on overall knowledge, attitude and practice on nutrition and health aspects showed significant improvement.
Opinion of the adolescent respondents with regard to NHEd showed that the respondents have given favourable reply to four statements before intervention and after intervention high favourable responses were seen in all the nine statements.

Thus it may be concluded that after intervention, a significant impact was observed on nutrition and health knowledge of the Anganwadi workers. On the adolescent respondents part, the impact was visible on the areas of nutrition and health knowledge and attitude. Extent of improvement in practice was lower than the knowledge and attitude in both nutrition and health. A little change was observed in nutritional assessment, variations were observed with respect to haemoglobin status and 24 hour dietary intake. It may be stated from the study, that the first step in bringing about desirable changes in nutrition and health practices namely acquisition of knowledge, and it had been accomplished with significant success. Further increasing the frequency and duration with appropriate teaching methods and aids would definitely empower the target group in knowledge, attitude, practices of nutrition and health aspects.

**Recommendations**

- NHEd component syllabus may be improved with focus on more of nutrition related topics such as selection of low cost locally available foods, conservation of nutrients and the role of foods in preventing deficiency symptoms.
- Anganwadi workers should be provided with adequate teaching aids and updated contents of the NHEd topics.
- The training of Anganwadi workers in the concepts of nutrition and health and also in the art of communication are found to be a neglected area and this needs to be taken up seriously.
> Periodical monitoring should be carried out by the supervisors or by the project functionaries to identify the weak spots of the service delivery.

> By and large, less or no motivation was observed. Hence, Anganwadi workers should be motivated by giving them adequate honorarium for their heavy work schedule.

> Involvement of local home science institutions for training / assisting Anganwadi workers in conducting NHEd.

> Awareness should be created to the community through mass media such as radio and TV regarding the NHEd programme.

> Community leaders and youth should be mobilized to take initiative in all the anganwadi activities.

> Salary may be enhanced for the Anganwadi workers.

> They are over-loaded with work and they may be relieved from other departmental activities and encouraged to focus only on packages of service delivery.
Suggestions for further research

> Comparative study of KAP between the ICDS beneficiaries and non-beneficiaries may be taken up.

> The effectiveness of strategies for launching NHEd concern to adolescent girls may be identified.

> The other service packages and their effectiveness on beneficiaries may be attempted.