

**IMPACT OF ADOPTION OF ANGANWADIS (ICDS)
BY THE NATIONAL SERVICE SCHEME UNITS OF
AVINASHILINGAM DEEMED UNIVERSITY, COIMBATORE**

By


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**A THESIS SUBMITTED TO THE AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND
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DECLARATION

I hereby declare that this thesis "IMPACT OF ADOPTION OF ANGANWADI (ICDS) BY THE NATIONAL SERVICE SCHEME UNITS OF AVINASHILINGAM DEEMED UNIVERSITY, COIMBATORE" is the result of investigation carried out by me in the Department of Home Science Extension, Avinashilingam Institute for Home Science and Higher Education for Women - Deemed University, Coimbatore, for the award of the Degree of Philosophy in Home Science Extension under the supervision and guidance of Dr.S.SITHALAKSHMI, M.Sc., M.Phil., Ph.D., Professor and Head, Department of Home Science Extension and that it has not been submitted for the award of any Degree/Diploma/ Associateship/Fellowship or Similar title of any other University or Institute.


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CERTIFICATE

This is to certify that this Thesis entitled "IMPACT OF ADOPTION OF ANGANWADIS (ICDS) BY THE NATIONAL SERVICE SCHEME UNITS OF AVINASHILINGAM DEEMED UNIVERSITY, COIMBATORE" submitted to Avinashilingam Institute for Home Science and Higher Education for Women - Deemed University, Coimbatore, for the award of the Degree of Doctor of Philosophy in Home Science Extension, is a record of original research work done by N.V.PUSHPABAI, M.Sc., M.Phil., Dip. Ed., during the period of her study in the Department of Home Science Extension, Avinashilingam Institute for Home Science and Higher Education for Women - Deemed University, Coimbatore, under my supervision and guidance and the Thesis has not formed the basis for the award of any Degree/Diploma/ Associateship/Fellowship or similar title to any candidate of any other University.



Signature of the Supervisor



Signature of the Head
of the Department

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Introduction

INTRODUCTION

Youth constitute the most abundant and energetic human resources of a country. They are the future leaders and vanguards of the nation. Their role in various spheres of national development must be recognised and their energies fully utilised.

The student youth particularly is a vast reservoir of human energy waiting to be harnessed for useful purposes. Only, they need opportunities which will capture and arrest their imagination, tap their power, unlock their talents and develop their potentials. This would be possible only when education is related to the solution of their personal and community problems and close association between the curriculae, colleges and the community is established (Munshi, 1973; Shinde, 1974; Ansari, 1975; Kumar, 1975; Kuriakose, 1976; Gandhi, 1977; Kulhari et al., 1977 and Devadas, 1978).

Mahatma Gandhi, the Father of the Nation, made a clarion call to the students to devote a certain portion of their time daily to serving the people around. He exhorted thus :

"Your education, if it is a vital thing,
must shed its fragrance in your surroundings".

Education must stem from the roots and culture of the society, its mores, living conditions, problems, goals and aspirations. Only then, can education become relevant to life and contribute to the development of the individual and the society. As Avinashilingam (1967) advocated, the educational system should be so shaped and directed that it can inspire the future generations to acquire desirable qualities in the interest of national development.

The University Grants Commission (UGC), the apex body on Higher Education in their policy frame (1988) recognised "extension" as the third dimension of the institutions of higher education, in addition to the earlier two fold dimensions of teaching and research. The policy frame states thus :

"If the university system has to discharge adequately its responsibilities to the entire education system and to the society as a whole, it must assume extension as the third important responsibility and give it the same status as research and teaching. This is a new and extremely significant area which should be developed on the basis of high priority".

This acceptance of extension as the third dimension equal in importance to teaching and research was in the context of a growing realisation that universities and colleges having institutional resources, knowledge and manpower have an obligation for the development of the community with particular reference to the overall and diverse learning needs of all segments of the people of the community (Khanna, 1988).

In consonance of the UGC mandate, educational planners and administrators have been taking efforts to involve students in colleges and universities in nation building activities. The sporadic and adhoc efforts in this direction got consolidated in the genesis of the National Service Corps (NSC) in 1969, which later became the National Service Scheme (NSS). Today NSS has become the single largest national programme covering 174 universities and involving 13.75 lakh students (Department of Youth Affairs and Sports, Government of India, 1998).

Realising the significance of the programme, several universities are already planning to give academic weightage to NSS. Avinashilingam University, Coimbatore is a pioneer in this innovative venture which has incorporated NSS in the curriculum of undergraduate students. Appendix I gives the details of the pattern followed.

Although involving students in community work is an ideological proposition, operationalisation of this effort is a challenging task calling for meaningful linkages and networking with the existing developmental programmes and inputs in the community. This is specially so since the student youth would be available only for a limited time of the year barring academic demands such as examination, vacations etc.

It is against this backdrop, Avinashilingam University decided to network the NSS with the on going Integrated Child Development Services (ICDS) Programme of Government of India, which is the largest health and nutrition intervention programme of the nation, targetting women and children.

The ICDS is the most "comprehensive" scheme of the Government of India for early childhood care and development. It aims at enhancing the survival and development of children from the vulnerable sections of the society. Launched in 1975 with 33 projects on an experimental basis, ICDS has expanded considerably in subsequent years, and has now come to be regarded as the most viable vehicle for reaching the goals set in the National Plan of Action for Children to be achieved by the year 2000 AD. In 1995-96, the ICDS programme was

universalised covering all the 5320 community Development Blocks and 310 major urban slums. It is perhaps the only countrywide programme in the world functioning on a large scale, requiring multi-sectoral operations and intersectoral linkages for its implementation (Department of Women and Child Development, Govt. of India, 1997).

ICDS is a unique programme; it encompasses the main components of human resource development, namely, health, nutrition and education. Under ICDS, a package of services, including supplementary nutrition, immunization, health check-up and referral services, is provided to children below six years of age and expectant and nursing mothers. Non-formal pre-school education is imparted to children in the age group 3-6 years and nutrition and health education to women (15 - 45 years). It takes a holistic view of the development of the child and attempts to improve both his pre-natal and post natal environment (National Institute of Public Co-operation and Child Development-NIPCCD, 1997).

The package of services under ICDS is routed through the 'Anganwadi' - a child care centre at the grassroot level - rural, urban or tribal areas. Each Anganwadi usually covers a population of 1000 in the rural and urban projects and 700 in the tribal projects with slight deviations in numbers based on the demographic and topographic variations.

The Anganwadi Worker (AWW) is the front line worker in the ICDS Programme. She is usually selected from among the educated women in the community itself and is responsible for delivering the package of services to children and mothers in her area. She works under the guidance of a supervisor and the Child Development Project Officer (CDPO), incharge of the project.

Keeping in view the significant role the 'Anganwadis' play in fostering the allround development of children and their mothers, the Avinashilingam University planned to adopt Anganwadis in the neighbourhood for NSS intervention. The Coimbatore Corporation has 356 Anganwadis, out of which 100 Anganwadis in the proximity of the University were adopted for involvement of the second and third year NSS students numbering over 2500. Two hours per week in the forenoon are allocated for NSS work, since the Anganwadis function mainly in the forenoons catering to the preschool activities.

The students were divided into groups of 20-25 each to work in an Anganwadi, under the guidance of a teacher incharge. The staff involved were given training in the ICDS and Anganwadi programmes who in turn oriented the students concerned.

During the course of planning NSS intervention in the Anganwadis, the need for a research thrust in this innovative endeavour at the higher education level was realised and hence this study on the **Impact of Adoption of Anganwadis by the NSS Units of the Avinashilingam University.**

The specific objectives of the study are to :

1. make a status study of the Anganwadis (ICDS) proposed to be adopted by the NSS
2. examine the details of involving NSS in the Anganwadi activities and
3. Evaluate the outcomes of participation of NSS in the Anganwadi Programmes in quantitative and qualitative dimensions.

GLOSSARY

Anganwadi is the child care centre at the grassroot level under the aegis of the ICDS Programme.

Anganwadi Worker (AWW) is the pre-school teacher monitoring the Anganwadi.

Sathumavu is a ready to eat nutritious mix, distributed to the target groups in the Anganwadis.

At risk cases are the children and other vulnerable groups with health complications and nutritional deficiencies.

Review of Literature

II REVIEW OF LITERATURE

The literature pertaining to this study has been reviewed under the following headings :

- A. NSS as a Means of Channelising Youth Power
- B. The Integrated Child Development Service (ICDS) Programme
- C. Highlights of Research in the Field of Study.

A. NSS as a Means of Channelising Youth Power

Youth is the most vital sector of the community. Youth is a complex of social and psychological correlates, with its own role pattern, styles of thinking and modes of behaviour. It is a social force characterised by innovation, initiative and dynamism. Their vigour and energy are the greatest assets of the nation. It is only through the revitalisation of the country's youth power, the development of the nation as a whole would be possible (Singh and Rao, 1965; Rao, 1974; Agarwal, 1974; Shinde, 1974; Gandhi, 1976; Singh and Kumar, 1977 and Nair, 1981).

The term "Youth" represents a vibrant resource and the hope and future of a country. Youth, particularly the student youth have a vital role to play with regard to the fostering and strengthening of social consciousness against social evils (Department of Youth Affairs and Sports, Government of India, 1998).

In India the idea of involving students in the task of national service dates back to the times of Mahatma Gandhi, the Father of the Nation. The central theme which he tried to impress upon his student audience again and again was that they should always keep before them, their supreme responsibility to the society.

The post-independence era was marked by an urge for introducing social service for students both as a measure of educational reform and as a means to improve the quality of educated man-power. The University Education Commission (1948) headed by Dr. S.Radhakrishnan recommended the introduction of national service in the academic institutions on a voluntary basis with a view to developing healthy contacts between the students and teachers on the one hand and establishing a constructive linkage between the campus and the community on the other (Avinashilingam University, 1996 and Ministry of Education and Social Welfare 1997).

In 1960, the Government of India, studied the national service approaches in several countries and published a report entitled "National Service for Youth", carrying a number of recommendations to develop a practical scheme of national or social service on a voluntary basis to provide rich and varied activities. The Indian Education Commission 1964-66 recommended that some form of social and national

service should be made obligatory for all students as an integral part of education at all stages, to improve discipline, to inculcate faith in the dignity of manual labour and to develop a sense of social responsibility. As a result of all these explorations, in 1969-70 the Ministry of Youth Services, Government of India finally launched the National Service Scheme (NSS) in the colleges on a voluntary basis, designed to impart education through community service.

The National Service Scheme, then known as National Service Corps (NSC) was launched in 1969-70 the Birth Centenary Year of Mahatma Gandhi, in 37 universities involving 40,000 students with primary focus on the development of personality of students through community service. The NSS helps to develop the society and brings about integration among the volunteers. NSS is a very good and useful scheme which also develops unity among the volunteers, develops attitude for social service, teaches discipline, creates a general awareness about the community and also develops the personality of the volunteers (Thangamani and Govind, 1992).

The National Service Scheme is a movement, a method and a programme to effectively involve the university teachers and students in making education socially relevant and using the system, to transform the society. This process not only

seeks to make the teaching purposeful and meaningful, but also to sensitize the members of the university and community who are a privileged group to contribute their might to the needs of the society.

The overall objective of the NSS is service to the community, while undergoing instruction in an educational institution. It is aimed to arouse the social consciousness of students and provide them with the opportunity to work with the people around them and to put the education they receive to concrete social use. In addition, it enables the students to upgrade their personality and experience through community service.

The more specific objectives of NSS are to ;

- * know the community in which the students work
- * understand themselves in relation to their community
- * identify the needs and problems in the community
- * develop among themselves a sense of social and civic responsibility
- * apply their education in finding practical solutions to individual and community problems
- * develop the competence required for group living and sharing responsibilities
- * gain skills in mobilising community participation
- * acquire leadership qualities and democratic attitude
- * develop capacity to meet emergencies and natural disasters and
- * practise national integration.

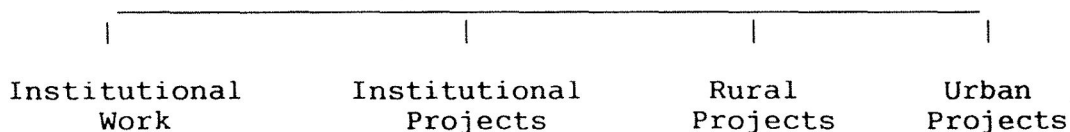
There are three principal elements in the NSS programming process. They are, the students, the teachers and the programme content. Each of these elements has many components. The students have their interests and their needs, their special abilities, their relationships with each other and with the teacher, their particular norms and values related to their family and community life. The teacher has his professional knowledge and skills, his special abilities, his role as a representative of the college and as a bearer of the values and norms of the college and of society as a whole. The programme content is designed to meet the needs and interests of the students and to maintain or change the norms and values of the group, the community and the society. If the NSS is to provide a meaningful experience for its members, the interaction of these three elements is essential. The important consideration is that no single element is over-weighted at the cost of the other (Avinashilingam University, 1996).

There are two types of programmes. They are :

- (a) regular NSS Programmes under which students undertake various activities in the adopted villages, college campuses and urban slums during weekends or after college hours and
- (b) special camping programmes, under which camps of 10 days duration are organised in adopted villages or urban slums during vacations with some specific projects in hand and with involvement of the local community.

The NSS Programmes undertaken either under regular or special camping cover four aspects.

Aspects of NSS Programme



Institutional work

The students may be placed in selected welfare agencies outside the campus to work as volunteers.

Institutional projects

Improvement of campuses, construction of play fields, swimming pools etc.

Rural projects

Eradication of illiteracy, minor irrigation works, agricultural operations, health, hygiene, sanitation, development of rural roads etc.

Urban projects

Adult education, welfare of slum dwellers, training in civil defense, first aid, hospital work etc.

The NSS aims at developing amongst students a sense of participation in nation building through social work and service. This deepens his/her understanding of the social environment and enriches his/her personality through actual participation in day to day life of the society. This process of learning is not only a desirable supplement to the classroom education but develops in the students a sense of responsibility, tolerance and co-operation. The NSS plays a vital role in the development of the latent aspects of the student's personality (Murthy, 1996).

B. The Integrated Child Development Service (ICDS) Programme

The pre-school is a period when children step into the threshold of a world outside the protective circle of the family and enter the portals of an educational institution. Hence the initial phase of this period has to be utilised in preparing the child for such an eventuality (Indian Council for Child Welfare-ICCW, 1994). In India, pre-school children comprise 18 per cent of the total population and are nutritionally vulnerable (Kothuria, 1994).

Research has indicated that the children of pre-school age are capable of acquiring knowledge, intellectual aptitudes and moral qualities. The pre-school plays an important role in the total development of the child's

personality. It is one of the most formative stages and also the important span to inculcate the desirable traits for the child's balanced overall development (Hurlock, 1982; Birsingh, 1988; Bhatia, 1989; Srinivasan, 1991; Ramesh and Rao, 1992 and Bakthavatchalam, 1993).

The pre-school education needs to be recognised as a pre-requisite for the healthy mental and emotional development of children. If one's childhood is well spent, well regulated and well organised, later he will take up the responsibilities of a full grown citizen (Devadas and Jaya, 1991). Childhood education is all the more important in a developing country like India where majority of the homes, particularly from the poor strata of the society, do not provide the ideal conditions for children's all round development during early childhood years. The pre-school provides such developmental opportunities to children under the guidance of a pre-school teacher (Mukobadyaya, 1981; Sharma, 1987; Suriakanthi, 1989 and Swaminathan, 1991).

The programmes and the activities of these pre-school institutions are mainly addressed to the physical and psychological, social and intellectual and aesthetic and sensory needs (Passi, 1987). The Sargent Committee Report (1944) was the first official report which highlighted the need for pre-school education in India and recognised the important role it played in the preparation

for primary education (Joshi, 1991; UNICEF, 1992 and UNICEF, 1994).

Keeping the significance of pre-school years in view, the National Plan of Action for the International Year of the Child had recommended that Preschool education should be made universally available to children of weaker sections of the society and those belonging to poverty groups. The pre-school is crucial in that it provides the child a foundation that will enable him to cope more effectively with the demands of the elementary school (Muralidharan, 1982).

Considering children as the country's 'supreme important assets', the National Policy on Children (1974) enjoins on the state to provide adequate services to them both before and after birth and through the period of growth, to ensure their full physical, mental and social development.

In pursuance of the National Policy and based on the recommendations of the Inter-Ministerial Study Teams set up by the Planning Commission in 1972, the Integrated Child Development Service (ICDS) programme was evolved by the then Ministry of Social Welfare, Government of India to make a coordinated effort for an integrated package of delivery of services to preschool children (NIPCCD, 1983; NIPCCD, 1984; NIPCCD, 1986; NIPCCD, 1992 and NIPCCD, 1995).

The scheme was formally launched on October 2, 1975, on an experimental basis in 33 projects, (19 rural, 10 tribal and 4 urban) spread over all the 22 states and the Union Territory of Delhi, The scheme had subsequently grown in dimensions and coverage, to be acknowledged as the single largest child development programme in the country (Research and Reference Division, Government of India, 1993).

ICDS contemplates to improve the health and nutritional status of an individual right from birth or rightly even before birth when the baby is still in the mother's womb, by responding to all necessary needs especially the nutritional needs of mothers and thus provides nutritional protection to the unborn child (Department of Women and Child Development, Government of India, 1990 and Sharma, 1991).

ICDS, as observed by Dr. U.Ko. Ko., the Regional Director of the World Health Organisation (WHO) has adopted a multi sectoral and inter disciplinary approach and the programme is directed by highly professional people and institutions in the country (NIPCCD, 1990 and Department of Women and Child Development, 1997).

The objectives of ICDS are to :

- * improve the nutritional and health status of children in the age group of 0-6 years ;
- * lay the foundation for proper physical, social and psychological development of the child;
- * reduce the incidence of mortality, morbidity, malnutrition and school drop out;

- * achieve effective co-ordination of policy and implementation amongst the various departments to promote child development and
- * enhance the capability of the mothers to look after the normal health and nutritional needs of their children through proper nutrition and health education.

The ICDS project operates in the Community Development Blocks in the rural areas, the Tribal Development Blocks in the tribal areas and a cluster of slums in the urban areas. A rural/urban project covers a population of 100000 spread in approximately 100 villages/slums; and a tribal project covers a population of 35000 in 50 tribal villages (NIPCCD, 1984).

"Anganwadi" meaning Courtyard Garden ('Angan' means Courtyard; 'Wadi' means garden in Gujarati language) is the focal point for the delivery of the package of services to children and mothers, right in their community. The concept of 'Anganwadi' was first used officially in 1972 in the report of the Mina Swaminathan Committee on Pre-school Education. Later in 1975 it was incorporated in the programme of the ICDS (Department of Women and Child Development, Government of India, 1990).

Anganwadis provide the early childhood education through encouraging play way methods to stimulate the mental development and satisfy the curiosity of the child. Children

learn to play together, recite rhymes and songs and learn the concepts of their surroundings and thus prepare themselves for a sound primary education in later years (Agarwal, 1992).

The ICDS Team

The Anganwadi Worker (AWW) is at the front line of the ICDS programme. Selected from the community, she assumes a pivotal role due to her close and continuous contact with the community and serves as a crucial link between the village population and the government administration (Ministry of Human Resource Development, 1990).

The organisation and administration of the Anganwadis, is the duty and responsibility of the Anganwadi Workers who teach children language and speech through conversations, songs, stories, dramas, purposeful activities and creative and artistic activities, free-play and recreation and suitable indoor and out-door games (Dolly, 1995).

The AWW is expected to monitor the growth of children, teach mothers how to prevent and cope with common ailments, educate parents to promote their children's normal growth, organise immunisation, distribute vitamin A, iron and folic acid tablets, treat injuries and ailments, organise supplementary feeding, refer cases to medical services and

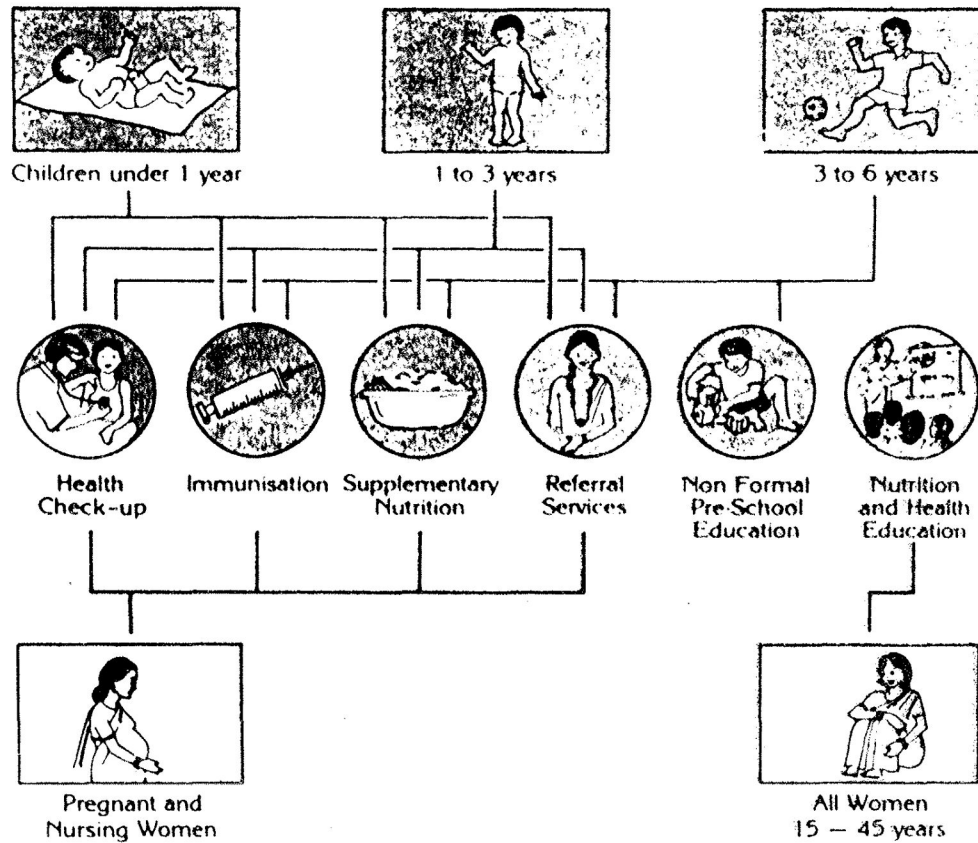
impart nutrition and health education to women of 15 to 45 years. Above all the AWW has to elicit community support and participation, organise Mahila Mandals (Women's groups) and also maintain records. She is assisted by a helper, a lady belonging to the same area. The AWWs are supervised by a supervisor. Normally, a supervisor is responsible for 17-25 Anganwadis (Briswal and Singh, 1989 and NIPCCD, 1990).

The Child Development Project Officer (CDPO) provides the link between ICDS functionaries and the government administration. The officer is also responsible for securing premises for the Anganwadis, identifying beneficiaries, ensuring supply of food and flow of health services and monitoring programmes and reporting to the State Government.

The Medical Officer (M.O), the Lady Health Visitors (LHV) and female health workers or Auxiliary Nurse Midwives (ANM) from nearby Primary Health Centres and subcentres form a team with social welfare functionaries to implement ICDS.

Package of Services in ICDS

As shown in Figure 1, the package of services provided by ICDS includes Supplementary Nutrition, Immunisation, Health Check-up, Referral Services, Pre-School Education and Nutrition and Health Education (NIPCCD, 1984).



ICDS : Services and Beneficiaries

Source: Department of Women and child Development, Government of India

Figure. 1

Supplementary Nutrition

Supplementary nutrition means identifying and fulfilling the deficiencies of calories, proteins, minerals and vitamins in the existing diets. Supplementary nutrition is given to malnourished children below 6 years of age identified on the basis of weight for age and for pregnant and nursing mothers, belonging to poor socio-economic groups (ICMR, 1986; NIPCCD, 1986 and Kurup, 1990).

In ICDS the supplementary food is provided to the children upto 6 years and to pregnant and nursing mothers for 300 days/year. There are research evidences to support the fact that the intake of nutrients was better among the beneficiaries of ICDS owing to the supplementary nutrition programme. There was a convincing decline in severe Protein Energy Malnutrition (PEM) cases in ICDS from 20 per cent to three per cent (NIPCCD, 1988; Adhish et al., 1989 and Singhal et al., 1989).

Immunisation

ICDS has played a significant role in improving the immunisation status of children and pregnant women where children below 6 years receive immunisation against measles, diphtheria, tetanus, whooping cough, typhoid and tuberculosis and expectant mothers against tetanus (Subramaniam, 1984; UNICEF, 1987; Mahajan, 1989; Masood and Sinha, 1989 and Thakur et al., 1989).

The dates for immunisation are intimated by the Child Development Project Officer (CDPO) or doctor. The Anganwadi Workers who have the list of those children and pregnant women who are not fully immunised persuade them to come to the Anganwadis on the fixed day, when immunisation will be arranged by the health staff. Immunisation against some diseases are organised on a campaign basis (NIPCCD, 1986). Studies show that the areas without Anganwadis tend to have a lower immunisation coverage (Lingaraju, 1993 and Zingary, 1993).

Health checkup

The health care of children includes periodical recording of weight on growth charts to monitor the nutritional status, general medical check-up once in 3 to 6 months, deworming against parasitic infections and treatment of minor illness (Kurup, 1990). For the assessment of nutritional status 'weight for age' criterion is used as it is the most common measure in the Anganwadis for the assessment of nutritional status (Sudhaphogat et al., 1990).

Growth monitoring of children from birth to five years is one of the important methods of detecting early growth faltering, assessing nutritional status of children, taking appropriate measures for reducing the incidence of malnutrition and improving the nutritional status (Ranjan,

1988). Health care services are provided to the beneficiaries through the medical and para-medical staff of the nearby Primary Health Centre or sub centres (Mahanti, 1993).

Research studies revealed that ICDS has been fulfilling a major national need leading to a decline in IMR and birth rate, better immunisation coverage and larger acceptance of family planning (Gupta, 1989).

Referral Services

Referral services are provided to both mothers and children and high risk cases are sent to referral hospitals for special care (Department of Women and Child Development, Government of India, 1990 and ICDS, 1991).

Non-formal Pre-school Education

Children between 3-5 years are being imparted non-formal pre-school education in the Anganwadis with a view to developing in the child desirable attitudes, values and behavioural patterns and also to provide environmental stimulation. The idea is to satisfy the curiosity of the child and channel it in a creative direction, a step towards mental and emotional preparation for the child to enter the elementary school (Kurup, 1990).

Research studies revealed that 70 per cent children who had received pre-school education in the Anganwadis were subsequently enrolled in the primary schools. The intellectual status of the children in ICDS area was found to be better than that of the children from the non-ICDS areas (Adhish et al., 1989; Lal and Wati, 1989; Paranjpe and Paranjpe, 1989 and Research and Reference Division, Government of India, 1994).

Nutrition and Health Education

Non-formal education in nutrition and health organised under ICDS for the women (15 to 45 years) has the following objectives : To

- a. make the community aware of their own health/nutrition problems and
- b. enable the community make the best possible use of available resources in the interest of their health and nutritional status (Department of Women and Child Development, Government of India, 1986 and Punhani and Mahajan, 1989).

This service enhances the capability of the mother to respond to the needs of the child. Through functional literacy classes, home visits by the Anganwadi and paramedical workers, demonstrations, short courses and

camps, special campaign and the use of mass media, the message is brought home to the mothers and other women which is helpful in selecting the right type of food from locally available cheap foods (Rajalakshmi, 1985; Dulla, 1987 and Kurup, 1990).

Special care is taken to ensure the attendance of pregnant women and nursing mothers and mothers of children who suffer from repeated illness or malnutrition. Research studies indicate great improvements in the nutrition and health status of the target women and children (Begum and Malathi, 1989 and Seshadri and Gopaldas, 1989).

Community Participation in ICDS:

Community participation in the context of child development is not a formality but a need. For effective implementation of the programme, there is a strong rationale in support of community participation. The responsibility for the growth and development of pre-school children is basically that of the parents and the community.

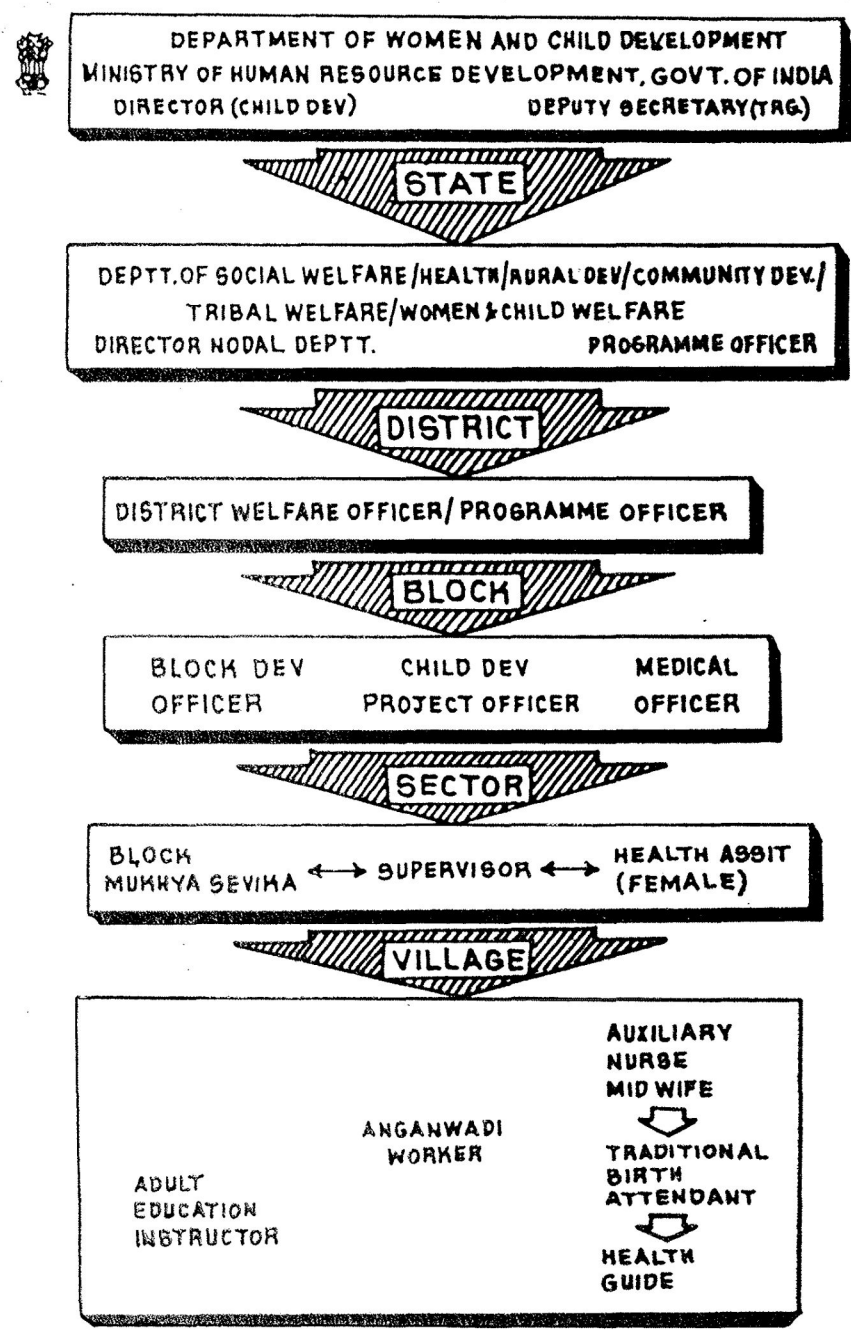
It is therefore necessary that the programme should be low cost in terms of Government's contribution and there must be much larger involvement of the community if the coverage of the programme has to be increased.

Community participation is an essential component of ICDS also for improving the knowledge and perception of the beneficiaries and the extent of their participation in the programme. In an urban ICDS project of Andhra Pradesh, most of the Anganwadis were being supported by way of rent free accommodation by the youth clubs and Mahila Mandals which were closely connected with the ICDS programme (Gandhi, 1984). Jayashree (1991) found that community participation in ICDS project of Jorhat district of Assam was satisfactory.

However, studies also reveal that community participation is the weakest link in the ICDS programme as reflected in the low level of the community's knowledge and awareness regarding ICDS (Paranjpe and Bhawat, 1984; Sharma and Chand, 1986 and Dev and Lal, 1989).

Monitoring ICDS

A Monitoring and Evaluation Cell has been set up in the Department of Women Child Development, Ministry of Human Resource Development, Government of India, which directs and monitors the entire programme of ICDS at the national level and network with other Ministries and Departments (Figure 2).



ORGANISATIONAL SETUP OF ICDS

Source : Department of Women and Child Development, Government of India.

Figure 2.

The monthly progress reports of Anganwadi Workers, Supervisors and the CDPOs, are the main tools of monitoring of the projects. The CDPO submits a consolidated monthly progress report to the State Directorate with a copy to the monitoring cell. Under the present system of monitoring, every ICDS project submits monthly reports and annual progress reports to the monitoring cell directly. The data are compiled to prepare the state level and national level reports.

The monitoring of the health and nutritional services is done by the Central Technical Committee located at the All-India Institute of Medical Sciences (AIIMS) at New Delhi. A Central Technical Committee has also been constituted in the NIPCCD to monitor and evaluate any special aspect of the programme (Ministry of Human Resources Development, 1990).

Several valuable lessons have emerged out of the ICDS experience of over two decades with a larger applicability to programmes for the development of human resources.

- * Community level honorary female workers can be effective and viable instruments of human resource development activities, if these workers are supported with training, guidance and necessary material inputs.
- * Integrated approach, including a package of mutually supportive services, is more cost effective than individual services delivered separately.

- * The ICDS type of network makes it feasible and easier to apply new, simple technology on a large scale.
- * Flow of human and material inputs has to be planned in detail and monitored very carefully.
- * Collaboration of academic institutions is very useful in providing, a low cost, objective feed back on the programme and continuing education to workers. The educational process in the academic institutions is also enriched with the field experience of the programme.
- * Large scale expansion of human resource development activities requires considerable delegation of administrative and financial decision-making to lower levels of administration. Delegation has to be real authority commensurate with responsibility - so that it improves administrative capacity for implementation.
- * Field experience should be continuously reviewed and utilised for improving manpower development activities.
- * Large scale efforts are needed to produce standardised materials on a carefully selected mix of core items and
- * Continuous monitoring and independent evaluation are essential to prevent deterioration during the expansion phase.

Thus ICDS has proven that it has the potential of becoming a silent revolution - a profound instrument of community development and human resources development.

Several evaluation studies on the ICDS programme speak of the beneficial results of the ICDS (India, 1991) which are summaries below :

- i. Two thirds of population covered by ICDS comprise schedule caste and schedule tribes and other backward communities.
- ii. ICDS has been able to cross income barriers and reverse usual trends of higher income groups availing benefits.
- iii. ICDS areas registered significant decline in the incidence of malnutrition.
- iv. Immunisation coverage of children in ICDS project areas was substantially higher than in the non-ICDS areas and
- v. Decline in infant mortality and birth rate and greater acceptance of family planning were observed in ICDS areas.

Realising the significance of the programme, in 1994, Govt. of India Committed to Universalise the ICDS to cover all the 5320 community Development Blocks and 310 major slums in the country.

C. Highlights of Research in the Field of Study

A study was conducted by Banerji (1980) to assess the impact of the intervention programme on the language and cognitive development of tribal pre-school children of Tokapal ICDS block in Madhya Pradesh. A matched control group was taken and pre and post test design was followed. The results showed that in most of the tests, the experimental group showed a higher gain than the control group.

As early as in 1985, Seshma and Anuradha conducted a study on the "Attitude of pre-school teachers towards pre-school Education Programme" in Tirupati and reported that majority of the Anganwadi Workers felt that play method is extremely essential for the development of the child.

Sahani and Agarwal (1985) conducted a study in Haryana on the cognitive abilities of pre-schoolers in an ICDS programme. The sample comprised 100 well-nourished children in the age group of 3-5 years. The results showed that a significant difference was observed in the knowledge and skills of AWWs and cognitive abilities of pre-school children after the intervention.

Srivastava and Srivastava (1989) conducted a study in Madras on the "Influence of ICDS on the Problem Solving Ability" which revealed that the children attending

Anganwadis had more ability for problem solving than the non-ICDS children.

A study entitled "Early Childhood Education - An Effort to enhance School Enrolment" was conducted by Sunderlae and Rajwati (1989) in Haryana. The study revealed that 70 per cent children who had received pre-school education in the Anganwadis were enrolled in the primary school and 80 per cent children who had attended Anganwadis were well adjusted and their scholastic performance was better when compared to other children.

A study on the "Impact of ICDS on Pre-school Education and Development of Children" was conducted by Adhish et al. (1990) on a sample of 114 children from rural ICDS and 108 children from non-ICDS areas in Aligarh district of Uttar Pradesh. The findings revealed that the intellectual status of the children in ICDS villages was definitely better than that of the children in the non-ICDS villages and higher intellectual status in ICDS areas was due to the impact of pre-school education and better nutritional status of children.

Pandey and Devadas (1991) carried out a study entitled "Impact of the Pre-school Education Component in the ICDS on the Cognitive Development of Children", Data on both experimental and control groups were collected from

Coimbatore city. The findings of this study have brought to light the superior nutritional and health status and cognitive development in children, who attended the ICDS programme as compared with their control counterparts, belonging to the same socio-economic background.

A study by Kalyani and Vasantha (1993) emphasised the need for music and stories for language development of children. Puppets, made of stick, paper bags and socks, glove puppets, finger puppets, flash cards and stuffed toys were the story aids commonly used. Among the musical instruments, bamboo rattlers, seed pod rattlers and drums were popular. Lack of storage place was the major problem.

A study on the functioning of 44 Anganwadis in Coimbatore City by Parameswari and Jaya (1996) revealed that the children in the 6 months to two years were utilising the services thus : supplementary nutrition (80 per cent), health check up (43 per cent), immunisation (73 per cent) and referral services (71 per cent). The two to five years children utilised the services thus : supplementary nutrition (82 per cent); health check up (82 per cent); non-formal preschool education (82 per cent) and referral services (9 per cent).

In another study on the functioning of Anganwadis by Banumathi and Vasantha (1996), it was observed that out of the 44 Anganwadis, 77 per cent had unclean surroundings.

None had toilet facilities. The kitchen and storage facilities were also poor and needed improvements. However, as for delivery of services, the Anganwadis fared very well.

Begum and Malathi (1984) conducted a study on "Nutrition Knowledge, Attitudes and Practices of Rural Mothers trained by Anganwadi Workers" in an urban ICDS block, Anakal, Karnataka. The sample comprised 80 mothers. There was a significant difference in the knowledge of the trained and untrained mothers on certain aspects like hygiene, sanitation and deficiency diseases. Their nutrition knowledge and practices were influenced considerably by associated socio-economic factors in both the trained and untrained mothers. Attitude towards nutrition was not associated significantly with any socio-economic factor. Nutrition knowledge and practices were significantly correlated with each other.

The nutrition status of children is an excellent indicator of their survival. Many researchers have reported of the prevalence of malnutrition and a large number of studies assessed the nutrition status of children in ICDS areas by the incidence of malnutrition of different grades. The research findings revealed that ICDS has helped in reducing the incidence of malnutrition in many areas (Punhani and Mahajan, 1989).

A study on the Impact of Disseminating Nutrition Messages to Women through 'a package of visual aids' developed for use by the Anganwadi Workers in ICDS, Assam' was conducted by Juliana and Sithalakshmi (1994) in North - West Jorhat ICDS project in Assam State. The Nutrition messages selected were : Basis of Foods and Nutrition, Nutrition for Mothers and Nutrition for Children. The target women at the pre-exposure and first post exposure stages revealed that the gain in knowledge and retention had positive and significant correlation. The other factors such as type of family, decision making pattern, consent of other family members, cost and time involved, previous exposure to visual aids, social participation, urban contact, decision making power and the extension agency contact also had positive co-relation with gain in knowledge, retention and adoption of nutrition practices. The cost estimate of the package of visual aids worked out to be Rs. 115/- per Anganwadi which is negligible and is worth consideration in the interest of weaker sections of the society, with far reaching benefits on the nutrition and health status of children and their mothers and consequent impact on the productivity of the human capital in the country.

An action research by Kondraju and Jaya (1995) to create health awareness among the mothers of Anganwadi children confirmed that participation in the education

programme raised the level of women's awareness on importance of nutrition, diets for special conditions, deficiency symptoms, preventive measures, significance of breast feeding etc. The health education brought excellent changes in health practices after exposure.

Gandhi (1986) who had conducted a study on "Community Participation in the Urban ICDS Project" Vizag, Andhra Pradesh had found that most of the Anganwadis were being supported by way of rent free accommodation by the Youth Clubs and Mahila Mandals and were closely connected with the ICDS programme.

Sharma (1987) had reported that many surveys and research studies have provided empirical information suggesting that the element of community participation is functioning far below the desired level as envisaged in the scheme. The steps suggested to strengthen it were that the community should be involved from the initial stage of implementation of ICDS. The scheme should be started in the area where the community has been prepared to receive the programme; efforts should be made to build active groups.

Parwani (1989) also conducted a study on the community participation in pre-school education in the Mehrauli ICDS project in Delhi. Lack of knowledge regarding the importance of pre-school education on the part of Anganwadi Workers as

well as the community, supplementary nutrition and not the pre-school education being a major motivation factor for sending children to Anganwadis, lack of involvement of other local organisations besides panchayats, lack of community involvement and participation and lack of contact between primary school teachers and Anganwadi Workers were some of the lacunae found in the functioning of the ICDS project.

A study by the Nutrition Foundation of India on behalf of the Government in 1988 had stressed the need for better motivation and training of Anganwadi Workers owing to the multifaceted role they play. It was found that the Anganwadi Workers, by and large possessed inadequate skills for conducting various activities which could perhaps be attributed to the training being too theoretical. The training methods used for imparting training to the grassroot level functionaries must lay emphasis on practical work (NIPCCD, 1988).

Studies in Haryana by Murthy (1987) and Chandrasekharan (1991) revealed that the Anganwadi Workers were knowledgeable and motivated to work with proper guidance. It was found that there was a positive impact of training in terms of gain in knowledge by the Anganwadi Workers.

A study by Subathra and Jaya (1988) confirmed that Anganwadi Workers exposed to training were able to comprehend the importance of play for the all round

development of preschool children; they also became familiar with indigenous play equipment and the methods to prepare more than 25 low cost play equipment.

Shanthi and Jaya (1989) attempted to enrich music education for pre-schoolers in the Anganwadis through training the AWWs. As a result of training, the AWWs enhanced their interest in music, prepared themselves for the song sessions, incorporated useful themes in songs and also learnt to compose simple songs.

Sridevi and Jayapoorni (1991) conducted an action research project on training the Anganwadi Workers in integrating science concepts in the curriculum which proved that after training, 70 per cent AWWs could incorporate 22 concepts related to physical sciences and 25 concepts pertaining to biological sciences.

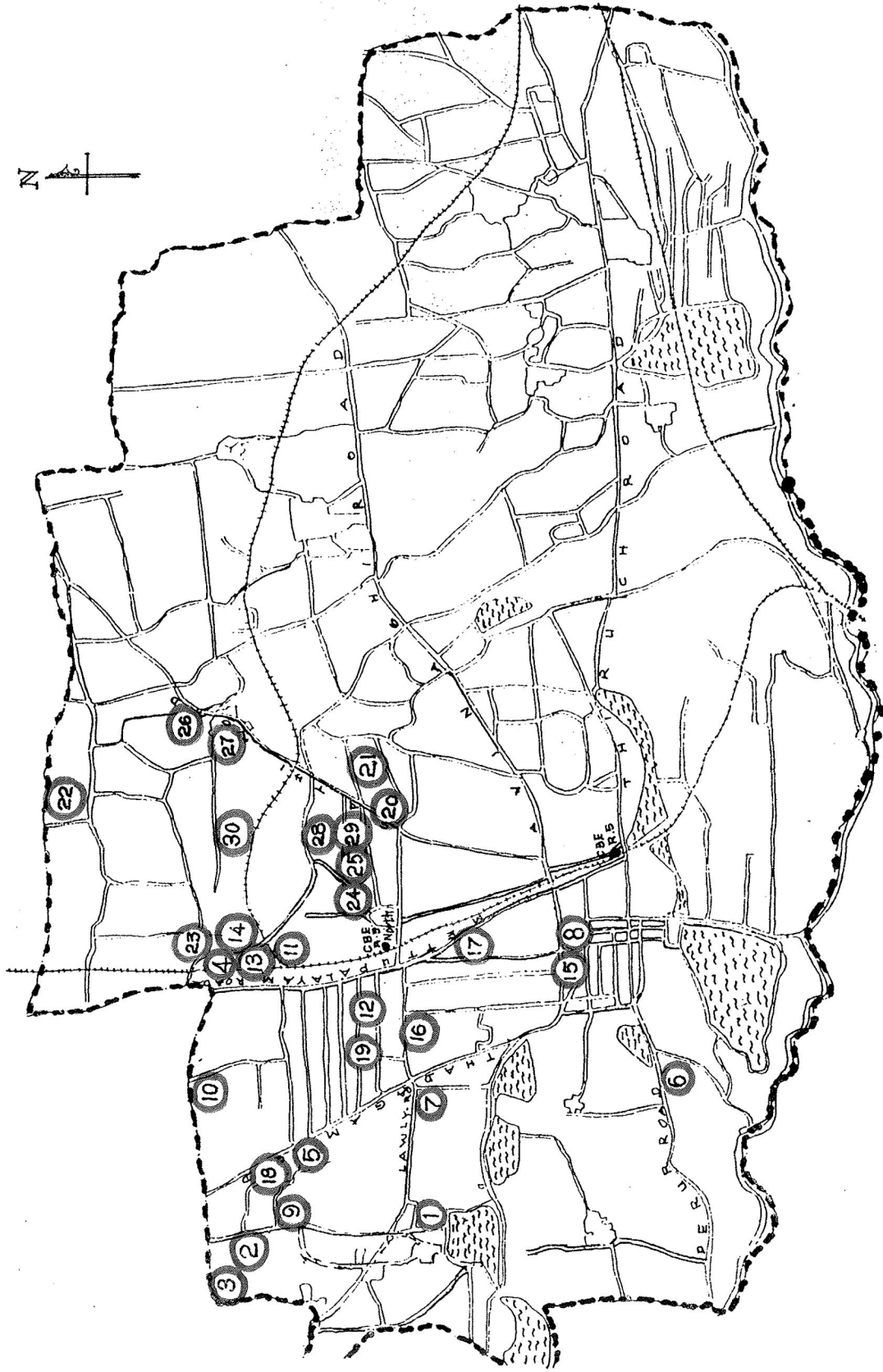
Juliana and Sithalakshmi (1992) conducted a study on the Training Programme for Anganwadi Workers of ICDS in Assam State, where there were nine training centres functioning under three different organisations - Indian Council of Child Welfare (ICCW), Assam Agricultural University (AAU) and Sadou Asam Maina Parijat, a voluntary agency. In total, 7786 AWWs were given job training and 2853 refresher training and 2422 helpers received their orientation. Most of the commonly used teaching aids were

available in all the AWTCs. Faculty improvement programmes were available. The problems faced by the AWTCs were inadequate budget, salary of the staff and physical facilities available. The gain in knowledge and acquisition was found to be significant in all the AWTCs. More than 80 per cent AWWs used teaching aids in their daily routine. Hygiene in the Anganwadis was found satisfactory. All the AWWs maintained discipline.

The study by Arya and Vasantha (1993) in Coimbatore pointed out that only 35 per cent Anganwadi Workers had received training in creative work. Lack of storage space, lack of resources, shortage of time and absence of motivation were the reasons attributed by the 20 Anganwadi Workers contacted, for not conducting creative activities in their centres.

Methodology

MAP OF COIMBATORE CORPORATION



Anganwadis adopted by National Service Scheme,
Avinashilingam University

FIGURE 2

**ANGANWADIS ADOPTED BY NATIONAL SERVICE SCHEME
AVINASHILINGAM UNIVERSITY**

S.No.	Area	Number of centres
1.	Seeranaickenpalayam	3
2.	Kovilmedu	5
3.	Velandipalayam	2
4.	Karuppusamy Nagar	2
5.	Venkittapuram	4
6.	Selvapuram	13
7.	Lawely Road	2
8.	Devangapet	2
9.	Gandhinagar	2
10.	K.K.Pudur	9
11.	Rajunagar	2
12.	Ramalingam Colony	2
13.	Karunanidhi Nagar	2
14.	Hosumin Nagar	2
15.	Weddereburnpet	2
16.	D.B.Road	2
17.	Kamarajapuram (Near Chithamani)	3
18.	Bhuvaneswari Nagar	2
19.	Jawaharpuram	2
20.	Police Quarters (Gandhipuram)	2
21.	Sithapudur	3
22.	Manigarampalayam	2
23.	Kannappa Nagar	3
24.	Sivanandha Colony	3
25.	Tatabad	3
26.	Ganapathy	4
27.	Ganapathy Kamarajapuram	5
28.	Ichipatty Colony	3
29.	R.C.Church (Radhakrishnan Road)	5
30.	Sanganoor	4
		100

The findings of the baseline survey are summarised hereunder :

Coverage of population

An analysis of the records showed that 22 per cent Anganwadis catered to 100 to 150 households; 46 per cent centres covered 151 to 200 households and 32 per cent had covered more than 200 households. Thus a majority of 78 per cent Anganwadis covered more than the stipulated number of households.

While 74 per cent Anganwadis covered the population as per the norms stipulated by ICDS, i.e., 1000, the remaining 26 per cent covered less than 900. The location of the Anganwadis, the number of households in the area and the size of the families were the factors determining the coverage of population by the individual Anganwadis.

Distancewise, 58 per cent Anganwadis were within easy reach of the community around (less than half a km), while 42 per cent were located at more than half a km, but within one km.

An analysis of the socio-economic background of the population covered by the Anganwadis revealed that the parents of the children were mainly unskilled and wage employed. Sixty per cent of the population covered by the Anganwadis were 'below poverty line'.

Coverage of target groups

Table I gives the details of coverage of the target groups by the 100 Anganwadis under study.

TABLE I
COVERAGE OF TARGET GROUPS IN THE ANGANWADIS

S. No.	Beneficiaries	Number in the area			Coverage		
		Boys	Girls	Total	Boys	Girls	Total
1.	Children 6 months to 2 years	2118	2035	4153	1440 68.0%	1058 52.0%	2498 60.4%
2.	2 to 5 years	2505	2046	4551	1653 66.0%	1289 63.0%	2942 64.6%
3.	Pregnant women	-	-	725	-	-	647 89.2%
4.	Nursing mothers	-	-	796	-	-	654 82.2%

The areas catered to by the 100 Anganwadis had 4153 children in the age range of 6 months to 2 years (2118 boys and 2035 girls). There were 4551 children between 2 and 5 years, of whom 2505 were boys and the rest 2046 were girls.

As for the coverage, only 60.2 per cent of the children in the age range of 6 months to 2 years were covered with the package of services of the ICDS and nearly 40 per cent were not covered. The coverage of girl babies was lower than that of boys by 16 per cent. The coverage of children in the 2-5 years age group under various services of ICDS was 66 per cent for boys and 63 per cent for girls.

Enquiries with the Anganwadi Workers revealed that the mothers were unable to bring their children below 2 years to the Anganwadis for the supplementary nutrition and health checkup due to the constraints imposed on them by their employment. The non-coverage of over 35 per cent children in the 2-5 years age group was mainly because of the desire of the parents to admit their children in the private, English medium nursery schools in their locality.

As for the pregnant women and lactating mothers, 89.2 per cent and 82.2 per cent respectively were covered.

Tenancy status

The survey revealed that out of the 100 Anganwadis under study, 92 were located in the Corporation owned buildings and the remaining eight centres were in the rented buildings.

Only three per cent centres had terraced roofing. A majority of 62 per cent of the Anganwadis had asbestos roofing only; while 31 per cent had tiled roofing, four per cent had thatched roof. The condition of floors and walls in nearly 50 per cent Anganwadis was poor and warranted minor and major repairs.

None of the 100 Anganwadis had toilet and drainage facilities, which is alarming. However, there were no regrets about access to water facilities for daily use in the Anganwadis.

It is depressing to note that only 25 per cent of the Anganwadis had outdoor space for play. Only one centre had kitchen garden. Perhaps lack of outdoor space made any type of garden an impossibility in these Anganwadis.

Details of functionaries

It was heartening to note that all the 100 Anganwadis had the Anganwadi Workers in position, being supervised by four supervisors. However, only 55 Anganwadis had two helpers as stipulated, while the rest were managed by only one helper. All the Anganwadi Workers had undergone the requisite formal training. Three out of four supervisors were also trained. Among the helpers, only 77 per cent were trained.

Experience-wise, 87 per cent Anganwadi Workers had put in more than 10 years of service. Two of the four supervisors had also more than 10 years experience.

Services offered in the Anganwadis

Supplementary nutrition

As per the norms stipulated, supplementary nutrition was provided to all the target children who were attending the Anganwadis or were brought to the centres for spot feeding. The coverage of pregnant women and lactating mothers under supplementary feeding was 89.2 and 82.2 per cent respectively.

Prophylaxis

In addition to supplementary nutrition, over 75 per cent children had been covered under the prophylaxis programme for Vitamin A. Supply of Iron and Folic acid had been made to 68 per cent of the target women.

Immunisation

As for the immunisation services for children, 90 per cent coverage was reported for DPT and 80 per cent was recorded for booster doses; 75 per cent pregnant women had received Tetanus Toxoid (T.T.).

Nutrition and Health Education

Non-formal education in nutrition and health was reported to be organised at the Anganwadis for the mothers of children as well as for pregnant and lactating women. The approaches employed to reach the women and the messages conveyed are given in Table II.

TABLE II
NUTRITION AND HEALTH EDUCATION IN THE ANGANWADIS

Details	Percentage of AWWs stating (n:100)
Approaches	
Home visits by the AWWs	72
Use of visuals	43
Informal verbal interaction	37
Demonstrations	25
Messages	
Importance of immunisation	72
Low cost nutritious supplements	53
Small family norm	35
Environmental sanitation	32
Breast feeding	31
Antenatal care	28
Kitchen gardening	15

Home visits predominated among the teaching methods used by the AWWs. The visual aids used were mainly posters, charts and pamphlets.

Community Involvement and Support

Community involvement and participation need to be persistently encouraged at the grass root level in order to make ICDS a community based programme. However, only 26 per cent of the Anganwadis had some kind of supportive help from the community. Community participation elicited included supply of used household items in the case of 15 Anganwadis

and supply of vegetables and fuel for 10 Anganwadis. Assistance for repair work was reported to be received only in one Anganwadi.

Constraints experienced

The constraints experienced by the AWWs are as given in Table III.

TABLE III
CONSTRAINTS EXPERIENCED BY THE AWWs

Constraints	Percentage (n:100)
Enrolment of children	
Competition with private nursery schools	58
Helper finds it difficult to fetch children from homes	27
Infrastructure	
Lack of toilet and drainage facilities	94
Inadequate play equipment and teaching aids	60
Lack of safety in the Anganwadis	47
Poor environmental conditions	44
Administration	
Vacancy not being filled	33
No possibility for promotion	26
Heavy record work	20
Community related	
Inadequate support from the community	40
Misuse of the Anganwadis by antisocial elements	25

There is a mushroom growth of private nursery schools (English medium) specially in suburban areas which is detrimental to the enrolment of children in the Anganwadis. As a consequence, the helpers in the Anganwadis are sent to fetch children.

The constraints with regard to infrastructural facilities mainly relate to absence of toilet facilities, inadequate play equipment for children, poor environment and lack of safety both for children and the stock of food in the centres.

The administrative problems centred around difficulties experienced in connection with inadequate personnel to monitor the activities and hurdles for personal growth namely stagnation in job and poor salary. Heavy record work was also mentioned as a constraint.

The constraints related to community participation were lack of interest on the part of parents and community members to maintain the public buildings. Several Anganwadi Workers (25 per cent) reported of misuse of the centres by anti social elements. This problem was mainly due to lack of safety in the centres.

B. Eliciting the Details of Involvement of NSS Students in the Anganwadi Activities

The authorities concerned namely the NSS Co-ordinator of the University and the 25 NSS Programme Officers reported of involving the NSS students in the various activities of the Anganwadis. The activities, selected based on the findings of the benchmark survey pertained mainly to

1. Strengthening the programme inputs under the different components of ICDS and
2. Augmenting the Infrastructural facilities.
1. Strengthening the programme inputs under the different components of ICDS

Non-formal Pre-school Education

1. Enrolling eligible children in the Anganwadis
2. Improving the attendance of Anganwadi children
3. Preparing teaching aids and toys using low cost materials
4. Conducting indoor and outdoor games
5. Providing Science experiences and
6. Training AWWs for the proper conduct of pre-school activities.

Supplementary Nutrition

1. Training AWWs and helpers on preparing nutritious recipes
2. Creating awareness about 'Sathumavu' (Nutritious mix) among the pregnant women and lactating mothers
3. Motivating mothers of children between 6 months to 2 years, pregnant women and nursing mothers to come to the Anganwadis for receiving the nutritious mix and feeding/consuming the same at the centre itself.

Health check up, immunization and referral services

1. Teaching mothers and children about deficiency diseases and communicable diseases.
2. Creating awareness about the importance of immunisation for children and pregnant women.
3. Conducting immunization camp, dental check up, eye camp, etc., in the Anganwadis
4. Assisting in the distribution of Vitamin A tablets to the children and iron and folic acid to pregnant women.
5. Ensuring data on birth weight
6. Helping AWWs in taking height and weight of the children and pregnant women and monitoring the growth charts.

Health and nutrition education

1. Educating mothers on good nutrition, food hygiene, health and sanitation and immunization
2. Creating awareness on breast feeding and weaning foods
3. Educating on small family norms and
4. Creating aids awareness.

Community participation

1. Creating awareness about ICDS Programme and its far reaching benefits
2. Collecting materials (dresses, mats, play equipment) from the public for distribution to the Anganwadis.
3. Contacting Lions clubs, Rotary clubs and other service organisations for help for the development of Anganwadis
4. Conducting different contests for children and parents and distribution of prizes
5. Getting help from the community for the
 - a. Repair of the Anganwadis
 - b. Construction of toilets and
 - c. White washing the centres, fencing and tree planting.
6. Enthusing local leaders and school teachers to participate in the Anganwadi activities.

Thus the NSS students and staff had definite plans for their adopted Anganwadis. Although the activities were based on the routine plan of work given by the ICDS programme, they were enriched with novel methods of teaching such as role play, video clippings, puppet shows, dramatization, action songs etc. The NSS students prepared low cost visual aids (posters, charts, models and specimens), to create interest in children in the Anganwadi activities.

The students participated in the mothers' meetings and helped in the conduct of classes on nutrition and health, through interesting methods such as exhibition, demonstrations, puppet shows and cultural programmes.

The NSS students had organised health camps, medical check ups, polio immunisation drives and also helped the Anganwadi Workers in maintaining the growth charts of children and in taking the anthropometric measurements. Plates 1 to 9 illustrate the involvement of the students in the different activities of the Anganwadis.

In implementing the above activities resources were mobilised from the Coimbatore Corporation and the District Development Departments, women's organisations and elected local bodies.

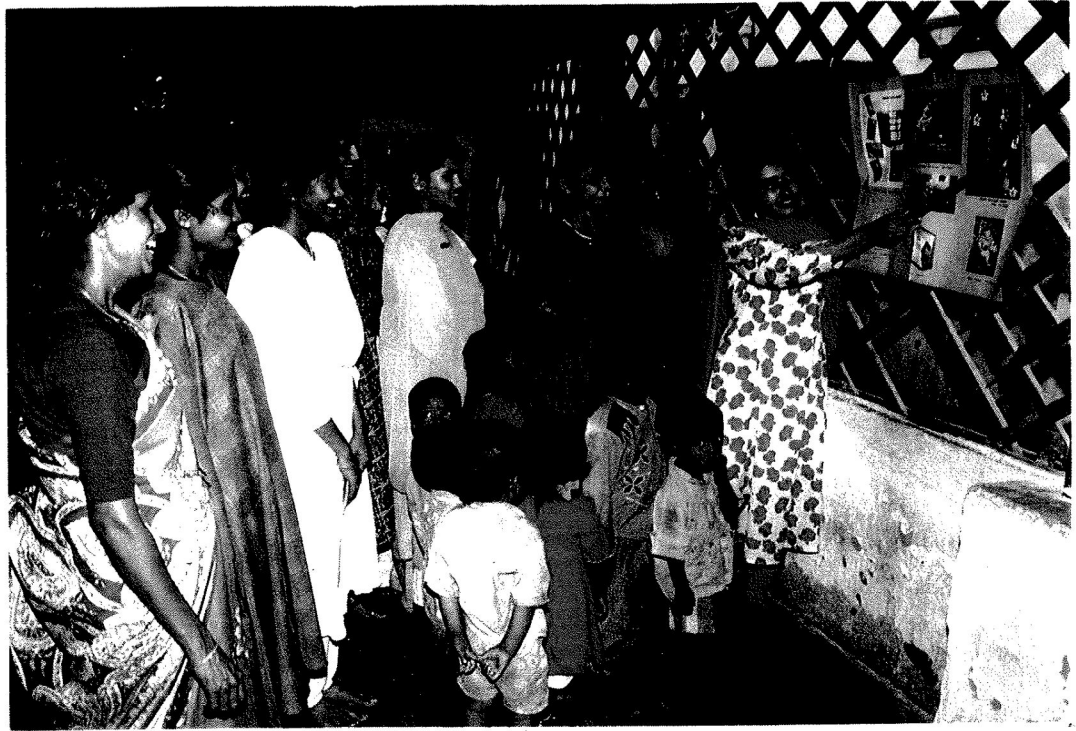


Teaching Action Songs



Teaching Action Songs

Plate 1



Teaching with Posters



Story telling with pictures



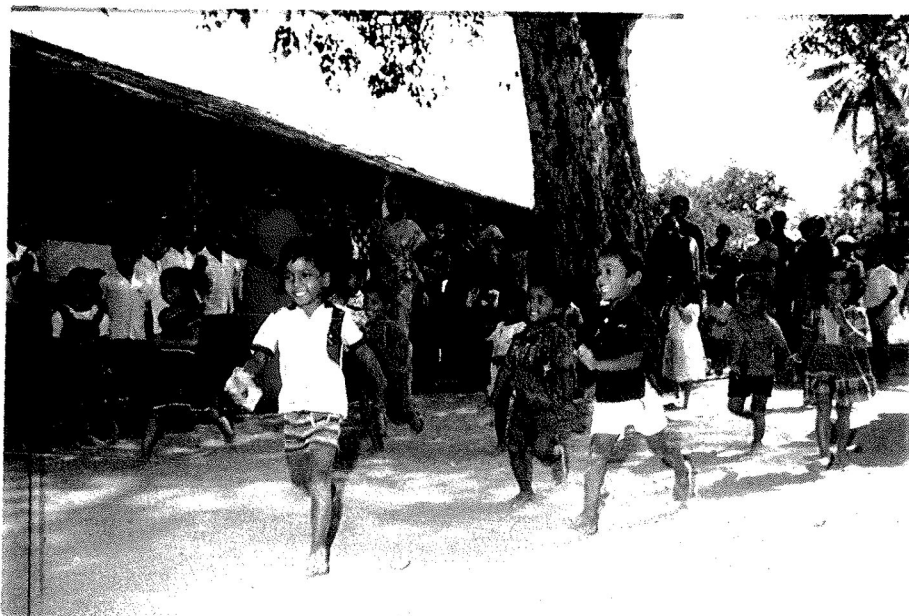
Teaching Exercises



Celebration of festivals



Conducting indoor Games



Conducting out door Games



Providing Creative Experiences



A Dance on 'Vande Madaram'



Prayer before taking noon meal



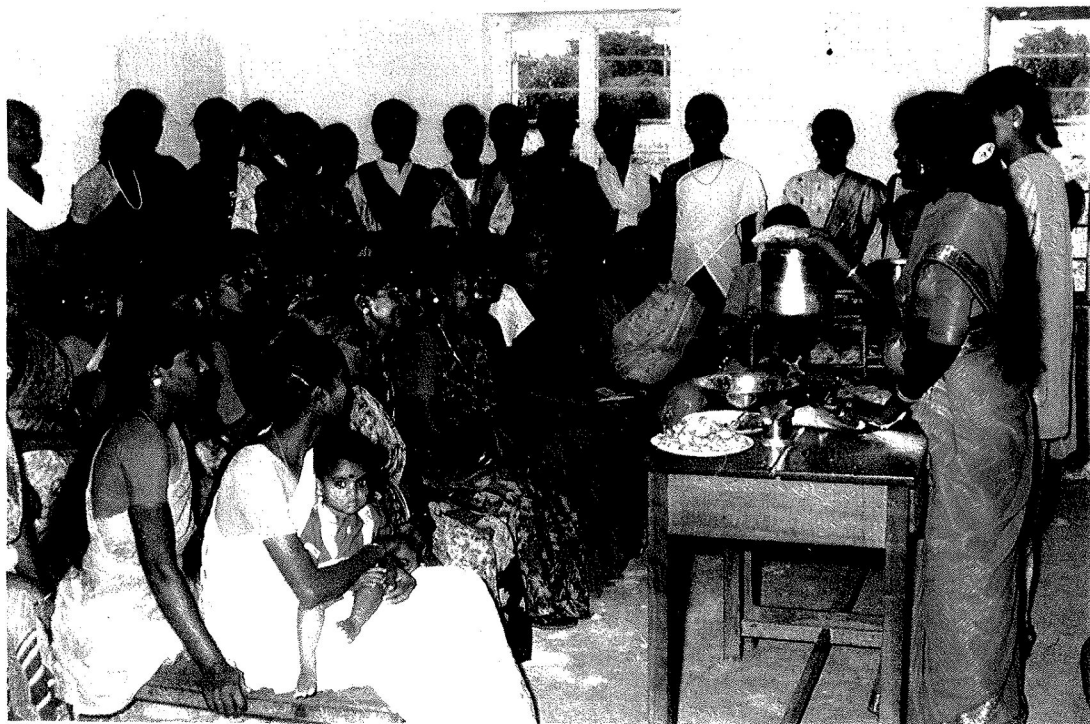
Children taking noon meal at the Anganwadi



Training in Personal Hygiene



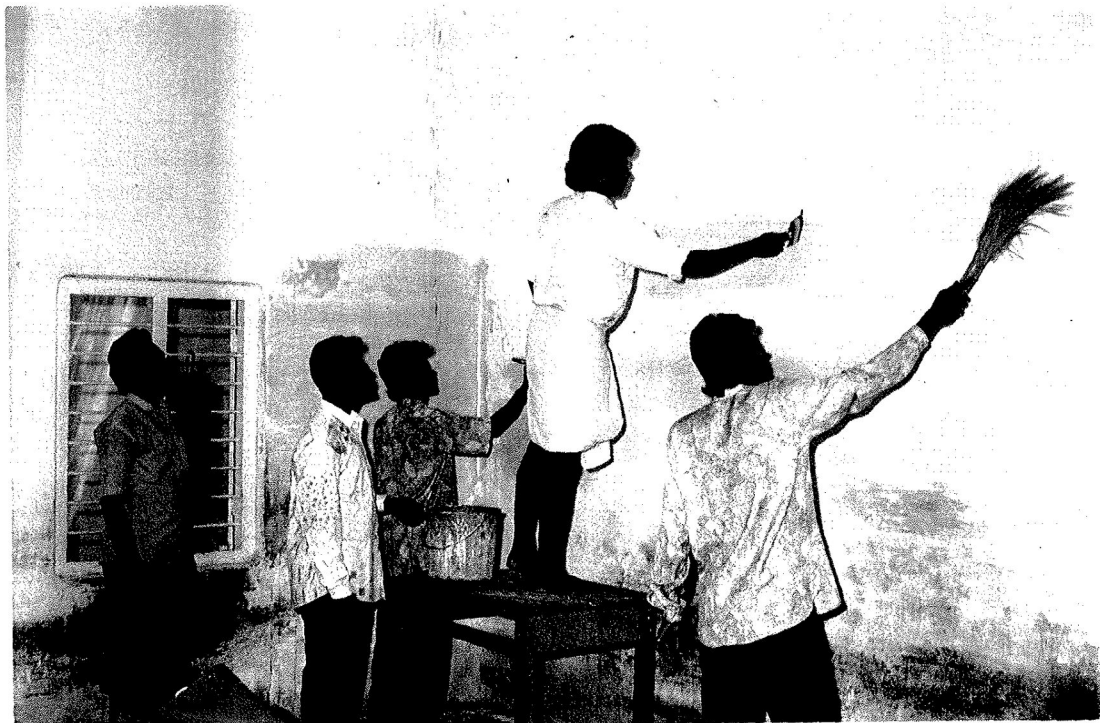
Health Check up



Demonstration on Soya Recipes



A mother receiving prize in a Nutrition competition



Youth club members white wash the Anganwadi



Tree planting by the Community leaders

In addition, inservice training was given for the Anganwadi Workers and their assistants, utilising the training institutions associated with the University.

2. Augmenting the infrastructural facilities

The NSS students had made attempts also to establish physical assets such as fencing, urinals and toilets, drinking water etc. in the Anganwadis, based on the needs expressed by the Anganwadi Workers. White washing the centres and cleanliness of the surroundings were the common activities carried out by the students in most of the Anganwadis.

C. Evaluating the Impact of Adoption of Anganwadis by the NSS Units

The impact of adoption of Anganwadis by the NSS units was assessed after a three year period. The evaluation was done on the following lines :

1. Extent of utilisation of the services in the Anganwadis by the target groups;
2. Outcomes of the Non-formal Preschool Education;
3. Impact of the nutrition and health related services;
4. Community involvement and support for strengthening the Anganwadis
5. Impact of NSS intervention on the overall status and performance of the Anganwadis and
6. Learning outcomes for the NSS students.

1. **Extent of utilisation of the services in the Anganwadis by the target groups**

The parameters to judge the extent of utilisation of the services in the Anganwadis were :

- a. coverage of the target groups and
- b. Attendance of the children in the Anganwadis

a. **Coverage of the target groups**

Continuous motivation of the mothers and the general public about the programme inputs of the ICDS programme had significant impact on the coverage of the target groups in the Anganwadis. The 'before' and 'after' picture about the coverage of the target groups in the 100 Anganwadis adopted by the NSS units as available from the records maintained by the Anganwadi Workers was compared and the changes over the three years were noted.

b. **Attendance of the children in the Anganwadis**

At the beginning i.e, prior to adoption, the mean attendance of the children in the Anganwadis for one month (month of the survey) was taken to serve as the bench mark. Subsequently the mean attendance for every year was calculated from the records maintained by the Anganwadi Workers and compared with the bench march data.

2. Outcomes of non-formal preschool education

It was observed that the Anganwadi workers were expected to follow a routine time table for non-formal preschool education as stipulated by the ICDS cell, the co-ordinating agency for the programme in the District.

Before adoption, the NSS Programme Officers and students were asked to observe the non-formal preschool education activities being conducted in the respective Anganwadis and suggest improvement. The performance of the children after the adoption of the Anganwadis by the NSS was examined from the view points of NSS students, programme officers, Anganwadi workers and mothers of children (Appendix III).

3. Impact of nutrition and health related services

Provision of supplementary nutrition, immunisation coverage, referral services and nutrition and health education to mothers must have a combined effect on the nutrition and health status of the target groups.

The parameters to judge the nutrition and health status of the target groups were decided to be the following :

- a. Birth weights of babies
- b. Nutritional status of children and
- c Health habits of children

a. **Birth weights of babies**

The records of the birth weights of the babies born to the pregnant women covered by the respective Anganwadis were scrutinised by the investigator and comparison was made between the data prior to adoption of the Anganwadis by the NSS and that after a three year period.

b. **Nutritional status of children**

The growth charts maintained in the Anganwadis were examined by the Investigator to identify the normal children and children in the different grades of malnutrition. This exercise was done both in the beginning as well as after three years of adoption and the data compared.

c. **Health habits of children**

The NSS students took special efforts to educate the children and the Anganwadi Workers on desirable habits related to personal hygiene. The observations of the 100 Anganwadi Workers on this aspect before and after NSS intervention were recorded and compared (Appendix IV).

4. **Community involvement and support for strengthening the Anganwadis**

Every NSS unit attempted to mobilise resources from the community to augment the infrastructural facilities in the Anganwadis. All the programme officers were requested to keep a record of such assets created and maintained over the

three year period. These records were scrutinised by the investigator to assess the extent of participation of the community in developing the Anganwadis.

5. Impact of NSS intervention on the overall status and performance of the Anganwadis

The overall status and performance of the Anganwadis were assessed by the Investigator using an Investigator's Observation Proforma (IOP) as given in Appendix V. Scores were assigned to the individual items and every Anganwadi was assessed before and after adoption by the NSS units. A comparison of the mean score was done to note down the changes.

6. Learning outcomes for the NSS students

In addition to the contribution to the better functioning of the Anganwadis, NSS intervention had far reaching outcomes on the students involved in terms of changes in knowledge, attitude and practices.

Every year one hundred NSS students from the outgoing classes (i.e., the third years) representing one per Anganwadi were requested to give their learning experiences and outcomes and this exercise was repeated for three years thus eliciting the view points of 300 students (Appendix VI).

Results and Discussion

IV RESULTS AND DISCUSSION

The impact of adoption of Anganwadis by the NSS Units of Avinashilingam University is discussed under the following headings :

- A. Extent of Utilisation of the Services in the Anganwadis by the Target Groups
- B. Performance of Children in the Non-formal Preschool Education Activities
- C. Impact of the Nutrition and Health related Services
- D. Community Involvement and Support for strengthening the Anganwadis
- E. Impact of NSS Intervention on the Overall Status and Performance of the Anganwadis and
- F. Learning Outcomes for the NSS Students.

A. Extent of Utilisation of the Services in the Anganwadis by the Target Groups

The aspects discussed under this heading are :

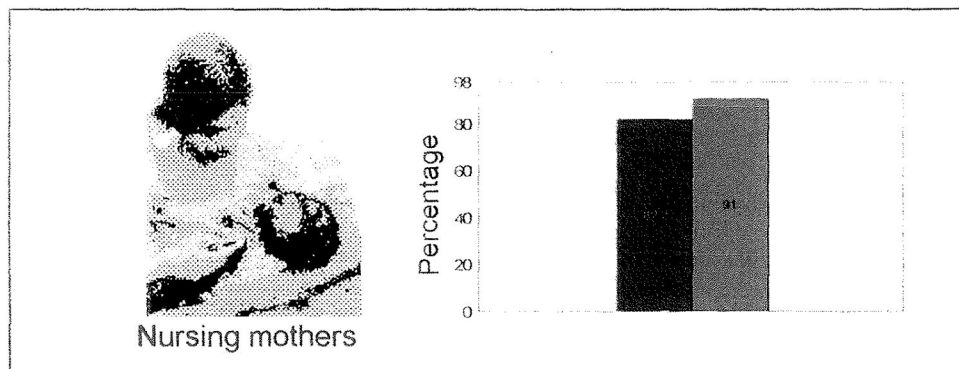
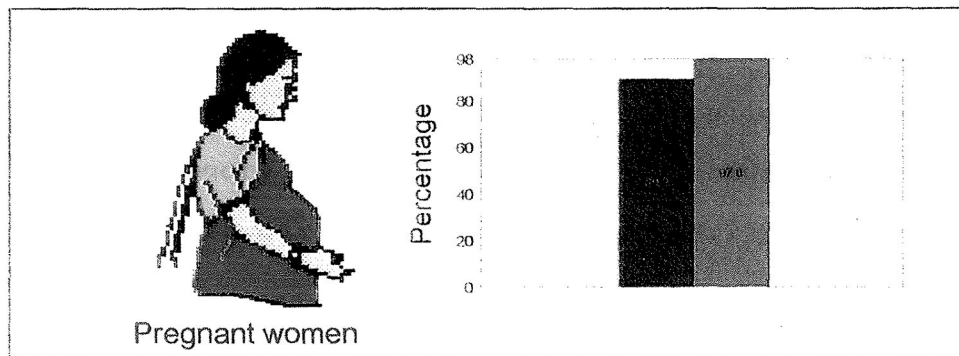
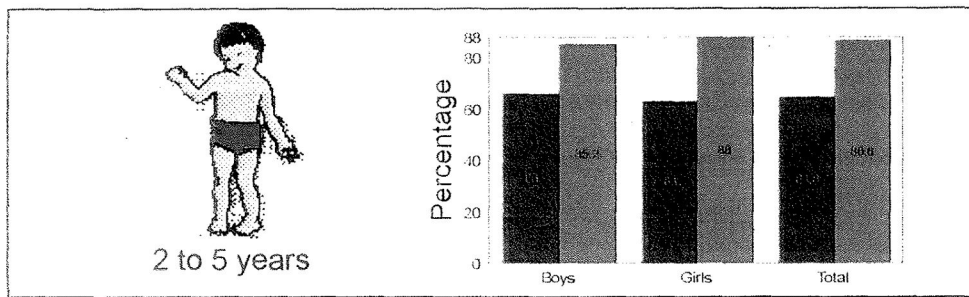
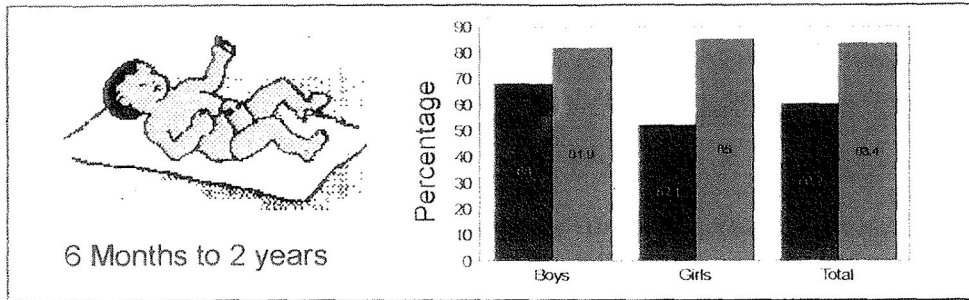
1. Coverage of the target groups by the Anganwadis and
2. Attendance of the Children in the Anganwadis.

1. Coverage of the target groups by the Anganwadis

Table IV and Figure 4 give the details of coverage of the target groups by the Anganwadis before and after NSS intervention.

TABLE IV
COVERAGE OF THE TARGET GROUPS BY THE ANGANWADIS BEFORE AND AFTER INTERVENTION

Target groups	Before				After									
	Boys	Girls	Total	Coverage	Boys	Girls	Total	Coverage						
Children 6 months to 2 years	2118	2035	4153	1440 68.0%	1058	2498	2002	1825	3827	1640 81.9%	1552	3192	1552 85.0%	83.4%
	2505	2046	4551	1653 66.0%	1289	2942	2207	1873	4080	1880 85.2%	1653	3533	1653 88.3%	86.6%
Pregnant women	-	-	725	-	-	647 89.2%	-	-	714	-	-	698	-	97.8%
Nursing mothers	-	-	796	-	-	654 82.2%	-	-	736	-	-	670	-	91.0%



■ B- Before
 ■ A-After

Figure. 4
 COVERAGE OF TARGET GROUPS BY THE ANGANWADIS
 BEFORE AND AFTER NSS INTERVENTION

It is noteworthy that over the period of three years, there has been a decline in the child population in the Coimbatore Corporation areas under study, thanks to the efforts towards population control.

As for the coverage of children in the 6 months to 2 years, there has been an increase of 23 per cent registered due to NSS intervention. It was interesting to observe that the increase in enrolment was more marked among girls (from 52 per cent to 85 per cent) than among boys (from 68 per cent to 81.9 per cent).

With regard to the enrolment of children in the 2 to 5 years category, the improvement was noteworthy - 22 per cent overall - 25 per cent for girls and 19.2 per cent for boys.

While 89.2 per cent pregnant women were covered in the beginning, 97.8 per cent were covered after the NSS intervention. Also there was a considerable increase in the proportion of nursing mothers in the area benefitting out of the ICDS services (8.8 per cent).

In order to examine whether the differences in the coverage of target groups by the Anganwadis after NSS intervention were statistically significant, Z - test was applied. Table V gives the details.

TABLE V

'Z' TEST ON THE COVERAGE OF THE TARGET GROUPS BY THE ANGANWADIS

Beneficiaries	Number in the area		Coverage		Critical Ratio C.R.	Level of Significance
	Before	After	Before	After		
Boys						
Children 6 months to 2 years	2118	2002	1440	1640	10.287	1%
2 to 5 years	2505	2207	1653	1880	15.180	1%
Girls						
6 months to 2 years	2035	1825	1058	1552	21.909	1%
2 to 5 years	2046	1873	1289	1653	27.471	1%
Pregnant women	725	714	647	698	6.538	1%
Nursing mothers	796	736	654	670	5.065	1%

From the critical values ($P \leq 0.01$), it could be inferred that the coverage of the target groups, namely children upto 5 years, pregnant women and nursing mothers improved significantly after NSS intervention.

Thus NSS intervention had made a definite mark on the coverage of the target groups by the Anganwadis which is a precursor for all other beneficial outcomes of the ICDS programme.

2. Attendance of children in the Anganwadis

The comparison of the mean attendance of children in the Anganwadis before and after NSS intervention is given in Table VI and Figure 5.

TABLE VI
ATTENDANCE OF CHILDREN IN THE ANGANWADIS

Percentage attendance	Percentage of Anganwadis (n : 100)			
	Before* intervention	After intervention		
		I year	II year	III year
91 - 99	2	4	7	15
81 - 90	18	30	37	43
71 - 80	40	35	38	30
61 - 70	25	21	14	10
51 - 60	15	10	4	2

* Mean attendance for the month when the benchmark was done.

Sustained efforts by the NSS students to persuade mothers to send their children to the Anganwadis, frequent mothers' meets and training and encouragement of the Anganwadi Workers to perform better, had a positive reflection on the attendance of children in the Anganwadis.

The improvements were marked in that 15 Anganwadis (as against two earlier) had 91-99 per cent mean attendance at the end of the third year. The mean attendance was 81 to 90

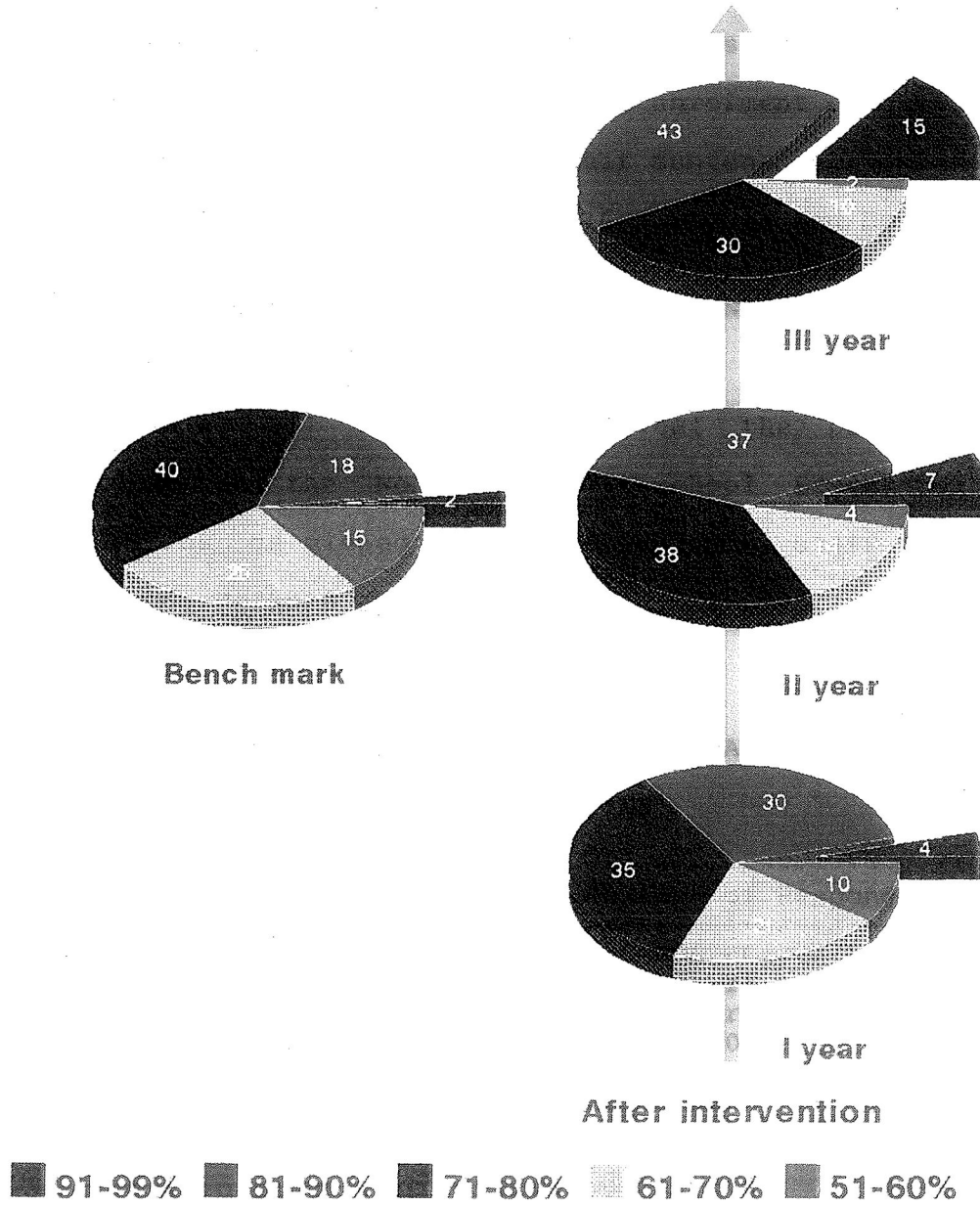


Figure. 5
ATTENDANCE OF CHILDREN IN THE
ANGANWADIS

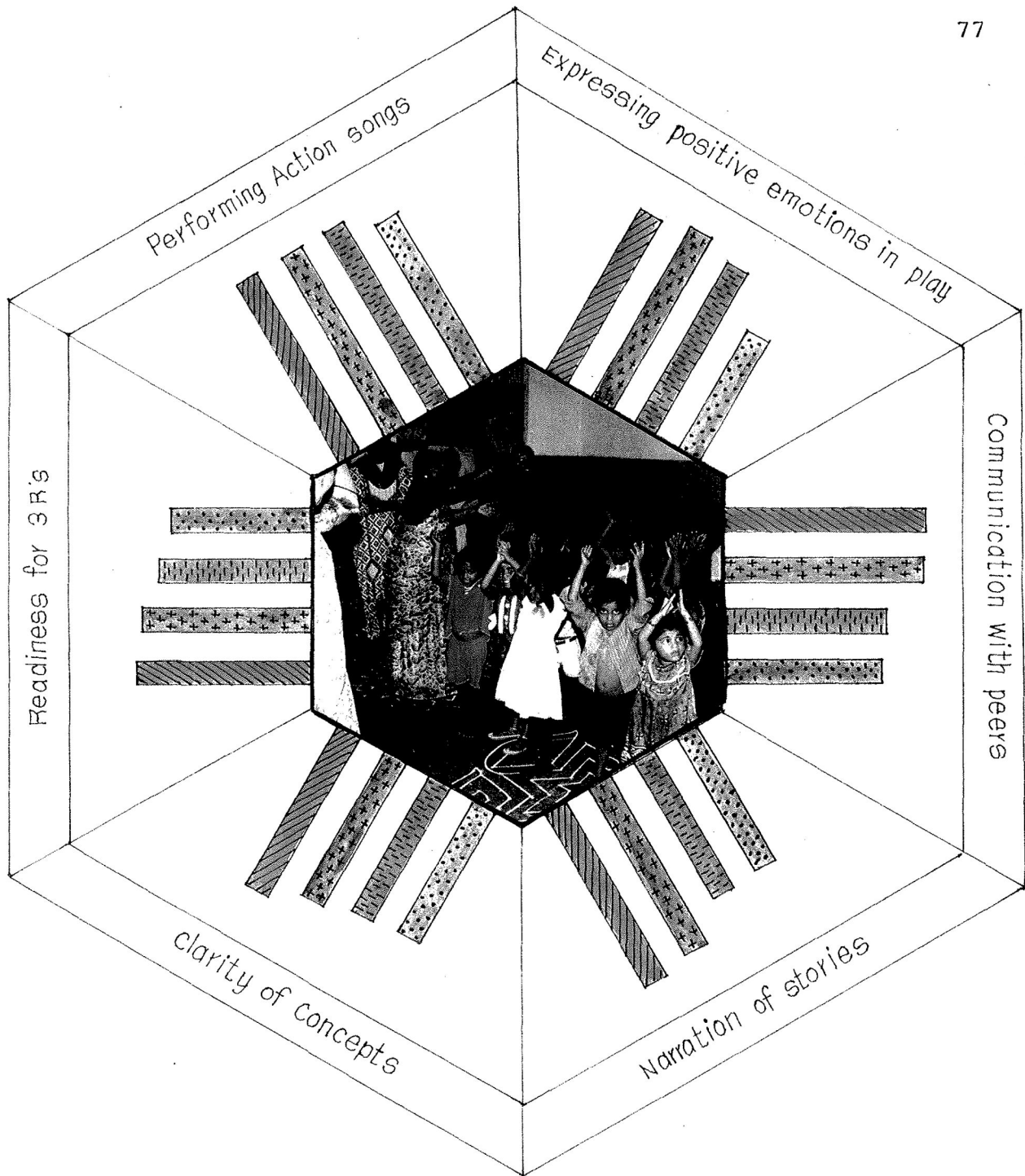
per cent in the case of 18 Anganwadis prior to NSS intervention and in 43 Anganwadis in the third year after the adoption. NSS intervention thus had a valuable contribution not only towards the enrolment of children in the Anganwadis but also on their sustenance, which is a harbinger for availing all the ICDS inputs and benefits.

B. Performance of Children in the Non-formal Preschool Education Activities

Table VII and Figure 6 reveal the performance of children in the Non-formal Pre-school Education (NFE) activities as viewed by the NSS students, staff in charge, Anganwadi Workers and mothers.

TABLE VII
PERFORMANCE OF CHILDREN IN THE NON-FORMAL PRESCHOOL EDUCATION
ACTIVITIES

Aspects	Percentage of Respondents			
	Students (n:300)	NSS POs/ Staff incharge (n:100)	AWWs (n:100)	Mothers (n:300)
Performing Action Songs	92	92	93	88
Expressing positive emotions in play	89	91	89	83
Communication with peers	96	95	82	78
Narration of stories	93	92	77	76
Clarity of concepts	89	85	77	75
Readiness for reading, writing and arithmetic	85	83	75	65



- ▨ Students
- ▩ NSS Pos/staff incharge
- ▧ AWWs
- ▦ Mothers

Figure .6

Performance of Children in the Non formal Pre School Education

The responses of the NSS students, Programme Officers and Staff incharge, Anganwadi Workers and mothers were more or less consistent with regard to the performance of the children in the Non-Formal Preschool Education activities in the Anganwadis.

The investigator's observations also confirmed that as a result of NSS intervention, the performance of preschool children improved in every aspect namely cognitive expression, social and emotional behaviour as manifested in play and communication with peers and in readiness for skills in three R's. Regularity in attending the Anganwadis by the children as brought forth by the NSS intervention perhaps is also a major contributing factor for this situation.

C. Impact of the Nutrition and Health related Services

This aspect is discussed on the following lines ;

1. Birth weight of babies
2. Nutritional status of children and
3. Acquisition of health habits by the children.

1. Birth weight of babies

During the year prior to adoption by NSS, there were 628 babies born in the areas adopted by the Anganwadis. During the three year period of adoption, a total of 1788 babies were born in the areas covered by the 100 Anganwadis adopted by the NSS.

Table VIII and Figure 7 give the birth weights of babies born to women in the areas covered by the Anganwadis.

TABLE VIII
BIRTH WEIGHTS OF BABIES BEFORE AND AFTER NSS INTERVENTION

Weight in kg	Percentage of Babies					
	Before			After		
	Boys n:316	Girls n:312	Total n:628	Boys n:906	Girls n:882	Total n:1788
2.5 to 2.75	31.0	30.1	30.6	9.9	9.5	9.7
2.76 to 3.00	57.3	57.7	57.4	70.2	71.4	70.8
3.01 to 3.25	11.7	12.2	12.0	19.9	19.1	19.5

After NSS intervention, a large majority of 90 per cent male babies and 90.5 per cent female babies had birth weights exceeding 2.75 kg, against 69 and 69.9 per cent respectively in that category earlier.

The birth weights of babies registered this increase owing to persuasion of the pregnant women by the NSS students to benefit from all the services of the ICDS programme including nutrition education.

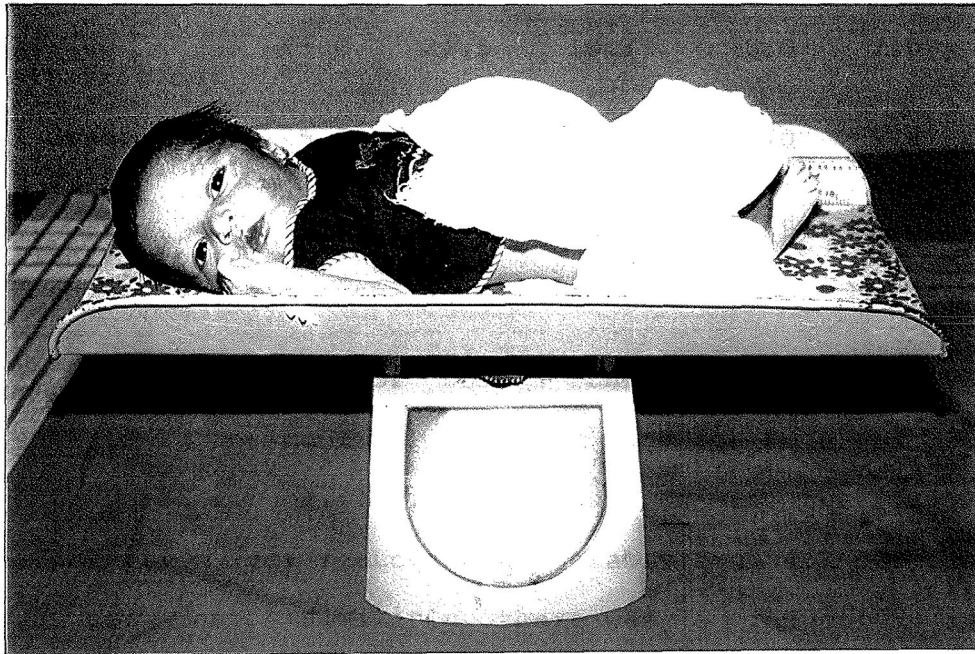
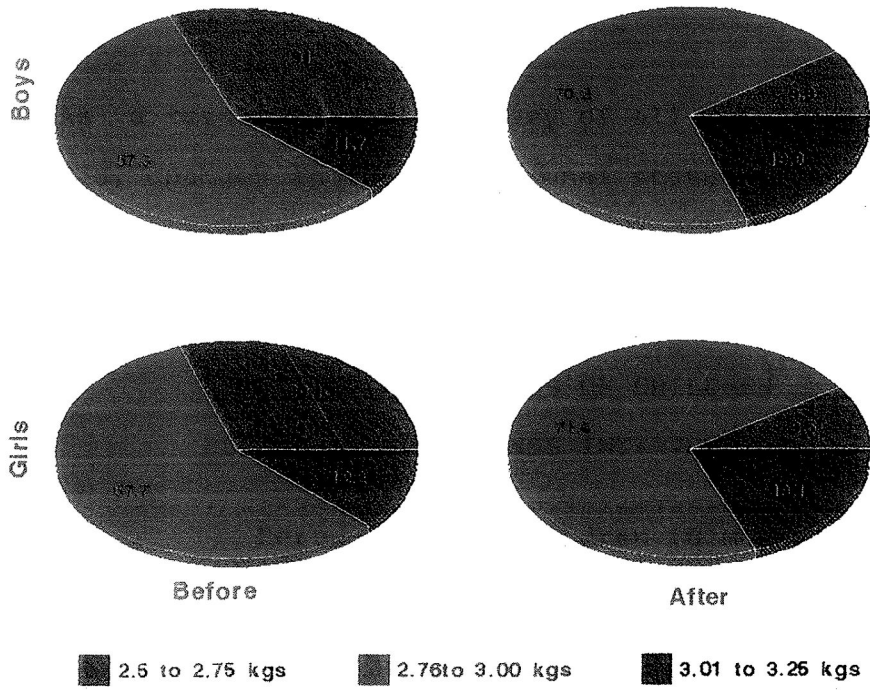


Figure. 7

Birth weight of children before and after intervention

2. Nutritional status of children before and after NSS intervention

As a result of the delivery of all the health related services, changes in the nutritional status of children were observed as revealed from Table IX and Figure 8.

TABLE IX
NUTRITIONAL STATUS OF CHILDREN
BEFORE AND AFTER NSS INTERVENTION

Category	Percentage of Children (6 months to 5 years)					
	Before			After		
	Boys n:3093	Girls n:2347	Total n:5440	Boys n:3520	Girls n:3205	Total n:6725
Normal for age	54.0	51.9	53.0	75.1	81.2	78.0
I Grade malnutrition	16.0	21.5	18.7	10.0	7.0	8.3
II Grade malnutrition	25.0	22.1	23.6	12.0	9.8	10.9
III Grade malnutrition	5.0	4.5	4.7	2.9	2.0	2.8

The proportion of 'normal' children rose from 53 per cent to 78 per cent (21 per cent more for boys and 30 per cent more for girls). The proportion in the III Grade malnutrition got reduced considerably from 4.7 per cent to 2.8 per cent. Similarly there was a reduction in the percentage in the II Grade malnutrition from 23.6 per cent to 10.9 per cent. The impact of regularity in attendance, availing supplementary nutrition as well as immunisation and referral services coupled with nutrition education for the mothers is thus obvious.

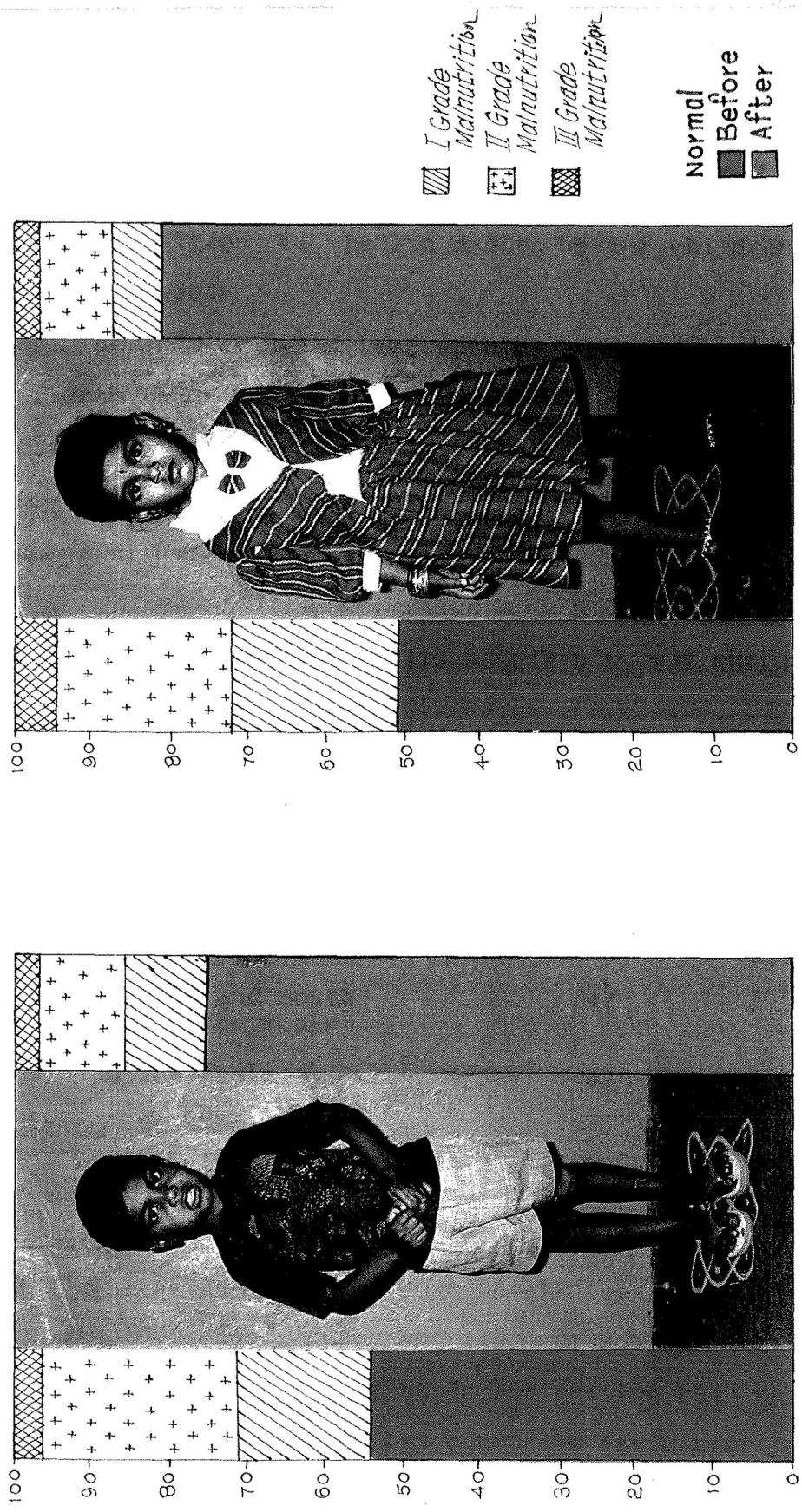


Figure.8

NUTRITIONAL STATUS OF CHILDREN BEFORE AND AFTER NSS INTERVENTION

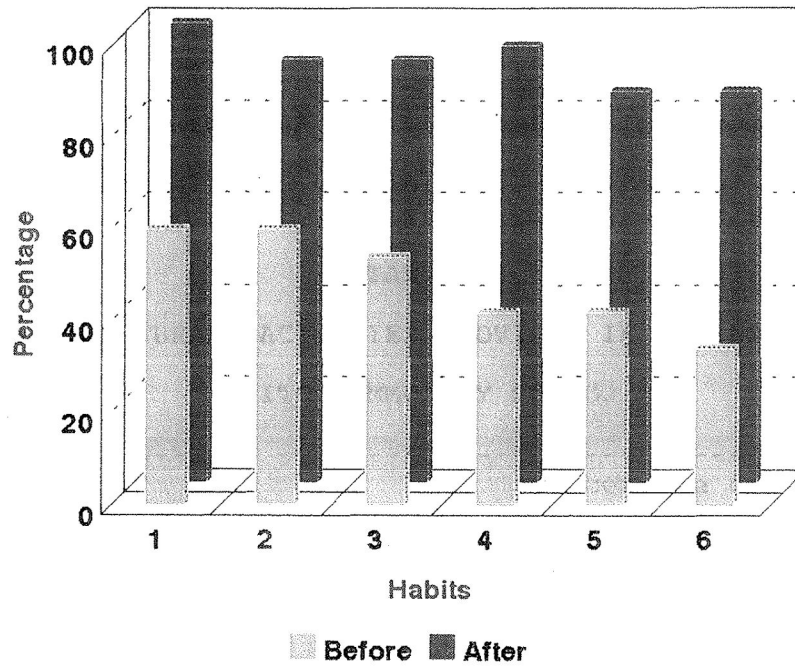
3. Acquisition of health habits by the children in the Anganwadis

The NSS students took special efforts to educate the children and the Anganwadi Workers on desirable habits related to health and personal hygiene. Table X and Figure 9 show the 'before' and 'after' picture as observed by the Anganawdi Workers.

TABLE X
DESIRABLE HEALTH HABITS ACQUIRED BY THE CHILDREN

Habits	Percentage of AWWs stating n:100	
	Before	After
Grooming the hair	60	100
Taking bath regularly	60	92
Neat and tidy dressing	54	92
Washing hands and mouth before and after meals	42	95
Brushing the teeth	42	85
Cutting the nails	34	85

NSS intervention has resulted in children in the Anganwadis acquiring desirable health habits such as better grooming of hair, neat and tidy dressing, taking bath, brushing teeth, washing hands and cutting the nails, all manifestating in good health conducive for better impact of other services such as supplementary nutrition and immunisation.



1. Grooming the hair
2. Taking bath regularly
3. Neat and tidy dressing
4. Washing hands and mouth before and after meals
5. Brushing the teeth
6. Cutting the nails

Figure. 9

Desirable health habits acquired by the children

D. Community Involvement and Support for Strengthening the Anganwadis

The infrastructural facilities created in the Anganwadis by the NSS units with the involvement of the community are enlisted in Table XI.

TABLE XI
INFRASTRUCTURAL FACILITIES PROVIDED IN THE ANGANWADIS
WITH COMMUNITY SUPPORT

Details	Percentage of Anganwadis (n:100)
'Face lift' to the appearance of the Anganwadis	100
Repair of the building and amenities such as watertap	58
Laying fence	50
Construction of soakage pits for drainage	38
Waste Water management for kitchen garden	35
Distribution of utensils, mats, carpets etc.	17
Construction of urinals/toilets	21

All the NSS units attempted to give a 'face lift' to their adopted Anganwadis, mainly through surface coating of the walls, namely white washing and painting, done with the help of local leaders.

In 58 Anganwadis, minor repair work of the building could be accomplished and 50 groups of students had laid temporary or permanent fencing to ensure safety to the Anganwadis. Attention was focussed on sanitation by 38 groups constructing soakage pits and 35 groups channelised waste water for kitchen gardening. It was a matter of great satisfaction that 21 NSS units were able to construct urinals and toilets. Useful items such as mats, carpets and cooking utensils were mobilized/procured with the help of the community and distributed to the Anganwadis by 26 groups.

E. Impact of NSS Intervention on the Overall Status and Performance of the Anganwadis

The scores for the various components of ICDS and the physical set up assigned to the individual Anganwadis (Appendix VII) were consolidated and the 'before after' picture of the mean percentage scores was compared to examine the overall impact of NSS intervention on the Anganwadis (Table XII and Figure 10).

TABLE XII
THE STATUS AND PERFORMANCE OF THE ANGANWADIS
BEFORE AND AFTER ADOPTION BY NSS

Criteria	Mean percentage scores obtained by the Anganwadis n:100	
	Before adoption	After adoption
Physical setup		
Utilisation of indoor space	68	78
Utilisation of outdoor space	72	76
Adequate light and ventilation	58	76
Good flooring	48	80
Neat walls	50	80
Mean value	60	80
Non-formal preschool education		
Enrolment	70	92
Attendance	70	94
Preparation of teaching aids	68	90
Use of appropriate teaching methods	64	88
Conduct of creative activities	50	82
Teaching appropriate songs & stories	70	100
Conduct of readiness activities	78	94
Mean value	68	92
Supplementary nutrition		
Attendance in the noon meal programme for children	84	96
Attendance in the noon meal programme for pregnant and lactating mothers	52	94
Hygienic food habits of children	70	92
Desirable cooking methods	72	94
Supervising noon meal programme	56	84
Mean value	66	92

Health checkup

Conducting medical camps	78	96
Conducting Eye camps	46	86
Distribution of Folic Acid and Iron Tablets to pregnant women	58	86

Mean value	60	90
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Immunization

Immunization camps for children	66	92
Immunization camps for pregnant women	58	90

Mean value	62	91
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Referral services

Identification of 'atrisk' cases	52	80
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Reffering 'atrisk' cases immediately to hospitals	46	86
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Mean value	50	84
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Nutrition and health education

Conducting mothers' meetings	80	88
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Appropriate messages conveyed in the meetings	68	82
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Use of suitable teaching methods	52	80
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Mean value	66	84
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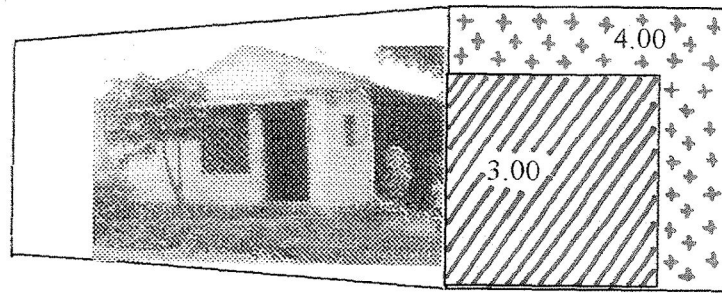
Community participation

Motivating community for participation in the Anganwadi activities	62	92
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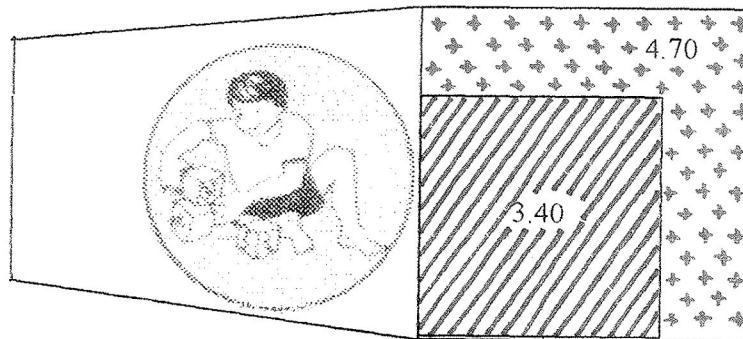
Community contribution in money, material and labour	56	80
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Community participation in the National Festivals	40	86
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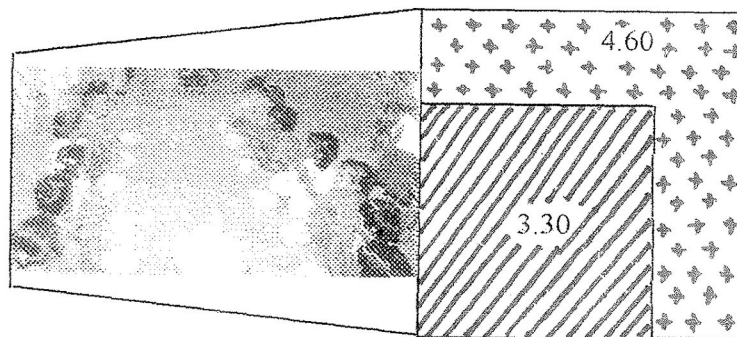
Mean value	52	86
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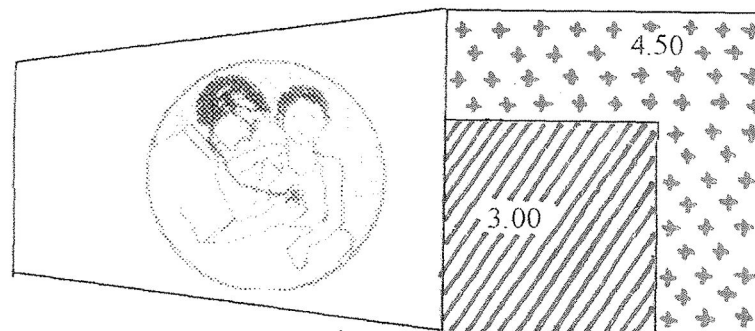
Physical setup



Non-formal preschool education





Supplementary nutrition



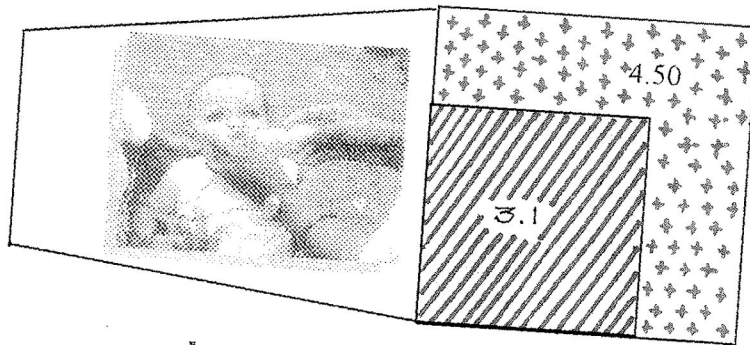
Health check-up

Mean scores

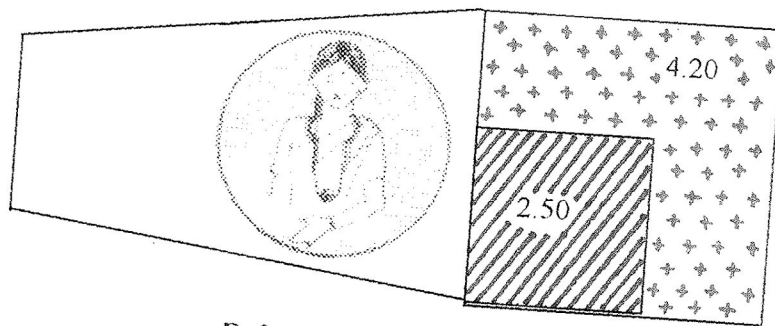
 Before adoption by NSS

 After adoption by NSS

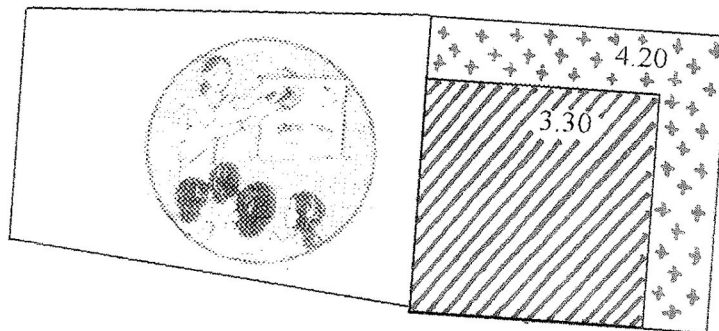
Continued.....



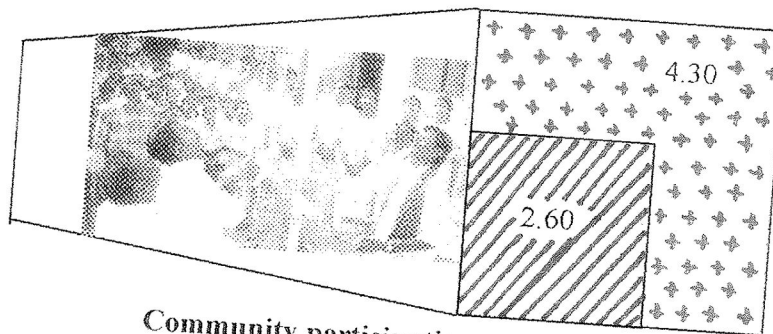
Immunization



Referral services



Nutrition and health education



Community participation

Figure. 10
Impact of NSS intervention on the Overall status and performance of the Anganwadis

The mean scores for the various aspects of the physical set up ranged from 48 per cent to 72 per cent prior to NSS intervention, whereas the percentage scores after NSS intervention rose considerably ranging from 76 to 80, the mean values being 60 per cent and 80 per cent before and after adoption by NSS.

With regard to the Non-Formal Preschool Education, the mean percentage scores before NSS intervention varied from 50 to 78 (mean value being 68). After adoption by NSS, the performance of the Anganwadis in this aspect registered an increase ranging from 82 to 100 per cent, the mean increase being 24 per cent.

As for supplementary nutrition, the mean percentage scores prior to adoption ranged widely from 52 to 84, the mean value being 66 per cent. The scores for all the criteria after NSS adoption improved to a great extent, ranging from 84 per cent to 96 per cent, the mean value being 92 per cent.

When the health check up aspect was examined, the mean percentage scores of the 'before' picture varied from 46 to 78 per cent, which increased to 86 to 96 per cent after adoption by NSS. The mean value was found to be 60 and 90 respectively before and after adoption.

With respect to the impact of NSS intervention on Immunisation, the two components had 58 and 66 per cent scores (mean 62 per cent) prior to NSS intervention. The 'after' picture scores were 92 and 90 per cent (mean 91 per cent).

The picture with regard to 'Referral' services revealed 46 and 52 per cent scores before adoption by NSS, whereas after intervention, the percentages rose to 80 and 86 (mean values 50 and 84) showing a remarkable positive change in this aspect.

The three components on Nutrition and Health Education, received 52 to 80 per cent scores prior to adoption by NSS. The 'after' profile was 80 to 88 per cent scores (mean value 66 and 84 per cent).

Community participation also had an encouraging trend. While 40 to 62 per cent Anganwadis alone had community support to a satisfactory level earlier, 80 to 92 per cent Anganwadis had community participation after NSS intervention (mean percentage being 52 and 86).

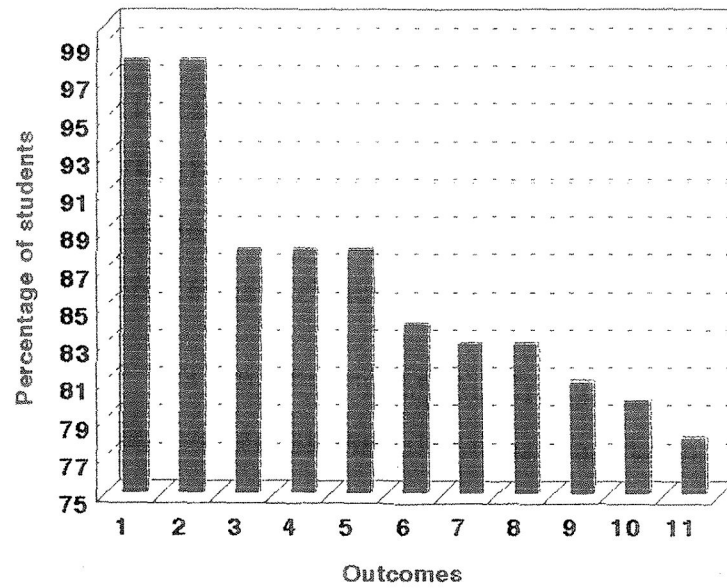
Thus NSS intervention had its positive impact on all aspects - physical set up as well as on the different programme inputs. This impact no doubt reflected on the beneficial outcomes of ICDS programme on the target groups namely children under five, pregnant women and nursing mothers leading ultimately to human resources development.

F. Learning Outcomes for the NSS Students

In addition to the contribution to the better functioning of the Anganwadis, NSS intervention had far reaching outcomes on the students involved as detailed in Table XIII and Figure 11.

TABLE XIII
LEARNING OUTCOMES FOR THE NSS STUDENTS

Learning outcomes	Percentage of students (n:300)
Learnt teaching techniques suitable for preschool children and mothers	98
Participated in the national programme on Pulse Polio Immunisation	98
Became aware of the health and nutritional status of the vulnerable groups in the adopted areas	88
Learnt the child survival strategies and inputs	88
Knew about the ICDS programme in operation	88
Understood the principles of nutrition, health and preschool education	84
Could facilitate improvements in the nutritional and health status of the vulnerable groups	83
Could apply subject matter knowledge in community service	83
Could upgrade the infrastructural facilities in the Anganwadis	81
Established contacts with ICDS officials	80
Could interact with community leaders and elicit support	78



1. Learnt the teaching techniques suitable for preschool children and mothers
2. Participated in the national programme on Pulse Polio Immunisation
3. Became aware of the health and nutritional status on the vulnerable groups in the adopted areas
4. Learnt the child survival strategies and inputs
5. Knew about the ICDS programme in operation
6. Understood the principles of nutrition, health and preschool education
7. Could facilitate improvements in the nutritional and health status of the vulnerable groups
8. Could apply subject matter knowledge in community service
9. Could upgrade the infrastructural facilities in the Anganwadis
10. Established contacts with ICDS officials
11. Could interact with community leaders and elicit support



Figure. 11
Learning experiences for the NSS students

In the process of adoption of the Anganwadis and in working with the personnel involved and the target groups, the NSS students acquired a number of learning experiences in terms of knowledge, skills and attitudes.

Whatever may be the subject of specialization of the students, they were exposed to the realities of life and became aware of the health and nutritional scenario in the community particularly in relation to vulnerable groups. The students acquired knowledge, also on the child survival and growth strategies and programmes particularly about the ICDS. They were motivated to know about the concepts and principles of nutrition, health and early childhood education. Those who already had theoretical knowledge on these subjects could apply them in the field for the benefit of the community.

The students expressed their satisfaction of participating in the national events such as the 'Pulse Polio Immunisation'. In order to disseminate useful messages, the students had to learn appropriate teaching methods to interact with the preschoolers on one hand and the adult women on the other namely the pregnant women, lactating mothers and also the mothers of the preschool children.

Further, in order to give a 'face lift' to the Anganwadis, the students had to learn the skills of approaching the community leaders, officials of the ICDS programme and service organisations which was a worthwhile learning experience.

Thus NSS intervention in the Anganwadis not only had beneficial impact on the children and other target groups but also on the NSS students themselves. Such experiences have far reaching effects in shaping the NSS students to be worthy citizens of the nation.

Summary and Conclusion

V SUMMARY AND CONCLUSION

The student youth is a vast reservoir of human energy waiting to be harnessed for national development. There is a growing realisation among educational planners that education must be linked with the needs of the community. As a corollary, institutions of higher education are attempting to include 'Extension' as the third dimension of education, equal in importance to teaching and research. The National Service Scheme (NSS) initiated by the Department of Youth Affairs, Government of India in 1969 has become the single largest national programme, covering 174 universities and involving 13.75 lakh students.

Avinashilingam University, Coimbatore, India has been a pioneer in giving academic weightage to extension work by incorporating NSS in the curriculum of undergraduate students from the year 1991-92. The Integrated Child Development Services (ICDS) Programme of Government of India, the largest national health and nutrition intervention programme targetting women and children and implemented through the 'Anganwadis' (the childcare centres at the grassroot level) had been chosen as the vehicle to operationalise the involvement of the NSS students.

The present research intended to study the impact of adoption of the Anganwadis (ICDS) by the NSS units of Avinashilingam University.

The methodology for this research included :

1. Conducting a status study of the Anganwadis prior to adoption by the NSS units
2. Eliciting the details of involvement of the NSS students in the Anganwadi activities and
3. Evaluating the impact of Adoption of the Anganwadis by the NSS Units.

The status of the Anganwadis was studied through interviews with the Anganwadi Workers, scrutiny of the records maintained by them and observation by the investigator.

The details of involvement of the NSS students of the University in the Anganwadi activities were elicited through interaction with the University NSS Co-ordinator, the Programme Officers and Staff in charge and the NSS students, the Anganwadi Workers and the mothers of the children benefitting from ICDS. The involvement mainly pertained to strengthening the programme inputs of ICDS as well as augmenting the infrastructural facilities.

The impact of adoption of Anganwadis by the NSS units was assessed after a three year period.

The salient findings of this research are presented hereunder :

Extent of Utilisation of the services in the Anganwadis by the Target Groups

- * After NSS intervention, there has been an increase of 23 per cent in the coverage of children - 6 months to 2 years. The increase in enrolment was more marked among girls (33 per cent) than among boys (13.9 per cent).
- * With regard to the enrolment of children in the 2 to 5 years category, the improvement was noteworthy - 22 per cent overall - 25 per cent for girls and 19.2 per cent for boys.
- * The coverage of pregnant women and nursing mothers improved by 8.6 per cent and 8.8 per cent respectively after adoption by the NSS.
- * Statistical appraisal revealed that the improvements in the coverage of all the target groups, registered due to NSS intervention were significant.
- * Sustained efforts by the NSS students to persuade mothers to send their children to the Anganwadis, frequent mothers' meets and training of the Anganwadi Workers to perform better, had a positive reflection on the attendance of children in the Anganwadis. The improvements were noteworthy in that, 15 Anganwadis (as against two earlier) had 91-99 per cent mean attendance at the end of the third year. The mean attendance was 81 to 90 per cent in the case of 18 Anganwadis prior to NSS intervention and in 43 Anganwadis in the third year after the adoption.

Performance of Children in the Non-formal Pre-school Education Activities

- * As a result of NSS intervention, the performance of pre-school children improved in every aspect namely cognitive expression, social and emotional behaviour as manifested in play, communication with peers and in readiness for skills in three R's. In this regard, the response of the NSS students, Programme Officers and Staff incharge, Anganwadi Workers and mothers of the pre-school children were consistent.

Impact of the Nutrition and Health Related Services

- * After NSS intervention, a large majority of 90 per cent male babies and 90.5 per cent female babies born to the pregnant women covered by the Anganwadis, had birth weights exceeding 2.75 kg against 69 and 69.9 per cent male and female babies respectively in that category earlier. This can be attributed to the persuasion of the pregnant women by the NSS students to benefit from all the services provided under the ICDS programme, including nutrition education by the Anganwadi Workers.
- * As a result of the delivery of all the health related services, changes in the nutritional status of children were observed. The proportion of 'normal' children rose from 53 per cent to 78 per cent (21 per cent more for

boys and 30 per cent more for girls). As a corollary, the proportion of children in the III and II grade malnutrition got reduced by 1.9 and 12.7 per cent respectively.

- * NSS intervention has resulted in children in the Anganwadis acquiring desirable health habits such as better grooming of hair, neat and tidy dressing, taking bath, brushing teeth, washing hands and cutting the nails, all manifesting in good health conducive for better impact of other services such as supplementary nutrition and immunisation.

Community Involvement and Support for strengthening the Anganwadis

- * All the NSS units attempted to give a 'face lift' to their adopted Anganwadis, mainly through surface coating (white washing and painting), done with the help of local leaders.
- * Minor repair work (58 per cent), construction of soakage pits for drainage (38 per cent), waste water management (35 per cent), procurement and distribution of mats, utensils, carpets etc. (26 per cent) and construction of urinals and toilets (21 per cent) were also accomplished by the NSS units with the involvement and support of the community.

Impact of NSS Intervention on the Overall Status and Performance of the Anganwadis

A comparison was made of the mean percentage scores assigned to the Anganwadis for their physical set up and performance with regard to the delivery of inputs, before and after NSS intervention (Table XIV).

TABLE XIV
COMPARISON OF THE MEAN PERCENTAGE SCORES BEFORE AND AFTER
NSS INTERVENTION

Aspects	Mean percentage scores		
	Before	After	Increase
Physical set up	60	80	20
Non-formal pre-school education	68	92	24
Supplementary nutrition	66	92	26
Health check-up	60	90	30
Immunisation	62	91	29
Referral services	50	84	34
Nutrition and health education	66	84	18
Community participation	52	86	34

The improvements registered after adoption by the NSS were remarkable with regard to health check up, immunisation and referral services, reflecting the earnest efforts putforth by the NSS students and staff to organise health camps, pulse polio immunisation campaigns and immediate follow up of the 'at risk' cases for referral services.

The positive changes with regard to eliciting community participation was also remarkable, keeping in view the limited time available for the NSS students to interact with the community.

Learning Outcomes for the NSS Students

- * In addition to the contribution to the better functioning of the Anganwadis, NSS intervention had far reaching outcomes on the students involved in terms of gain in knowledge, acquisition of skills as well as changes in attitudes.
- * The students were exposed to the realities of life and became aware of the health and nutritional scenario in the community. They acquired knowledge on the child survival and growth strategies and intervention programmes. Furthermore they gained knowledge on the principles of nutrition, health and child care.
- * The NSS students learnt the skills of working with the pre-schoolers and their mothers and interacting with the Anganwadi Workers, officials and the leaders of the community. In addition, they acquired skills in preparing and using innovative teaching methods for children as well as adults.
- * The students expressed satisfaction over the changes in their attitudes towards the weaker sections of the

society, were convinced about the need to build positive linkages between the university and the community around and realised their societal obligations as educated citizens.

Conclusion

NSS intervention thus had its positive impact on the different facets of the ICDS programme with noteworthy beneficial outcomes both on the target groups as well as on the students involved, all conducive for Human Resource Development.

The following are the recommendations emerging from this research.

To the Avinashilingam University

Although, this research has brought to light the positive outcomes of adoption of Anganwadis by the NSS units, it is a time bound study with a limited scope.

The University which has established its credibility as a pioneer in introducing this innovative venture at the higher education level, must strengthen the documentation system, so that over the years to come, longitudinal data on coverage of target groups and impact of the package of ICDS programme inputs may be compended to furnish valuable data base for the benefit of the policy framers concerned with mother and childcare.

To the ICDS Cell, Coimbatore

Coimbatore Corporation has 365 Anganwadis, out of which 100 have already been adopted by the Avinashilingam University. There are 15 colleges and 25 Higher Secondary Schools in the city with nearly 3000 students under the NSS. The ICDS cell can network with these NSS units and urge them to adopt Anganwadis each to cover the remaining 265 Anganwadis under their regular and special activities, so that all the programme inputs of the ICDS reach the target population.

If this experiment succeeds, it will no doubt be a fore runner for the entire nation.

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Appendix

APPENDIX I

NATIONAL SERVICE SCHEME - AVINASHILINGAM UNIVERSITY MODEL

The University Grants Commission in their policy frame on higher education recognised 'Extension' as the third dimension of the higher education system in addition to the earlier two-fold dimensions of teaching and research. The policy frame states thus :

" If the University system has to discharge adequately its responsibilities to the entire education system and to the society as a whole, it must assume 'Extension' as the third important responsibility and give it the same status as research and teaching. This is a new and extremely significant area which should be developed on the basis of high priority".

Avinashilingam University has been fulfilling the social obligation of higher education ever since its inception even as a college in 1950's.

The founder of this educational edifice, late Dr.T.S.Avinashilingam had a lofty vision that the college should not function in isolation as an ivory tower but should extend its services to the community. Under the dynamic leadership of the Chancellor of the University, Dr. Rajammal P. Devadas, the institution has been sharing its resources, knowledge and manpower to meet the overall and diverse learning needs of all segments of the community.

With its rich heritage of participating in the National Service Scheme (NSS) from its inception in 1970's , the institution, when it attained the Deemed University status, ventured to introduce NSS in the undergraduate curriculum from 1991 -1992. Today there are 25 NSS units involving all the undergraduate students and B.Eds., taken care of by 96 staff members.

Administration

In order to fulfil the curricular and social mandate, NSS in the University has been planned with well knit co-ordination at all levels of administration. The Chancellor of the University is the President and the Vice Chancellor, the Chairman of the advisory committee (Figure 1).

ADMINISTRATIVE SET UP OF NSS AT AVINASHILINGAM UNIVERSITY

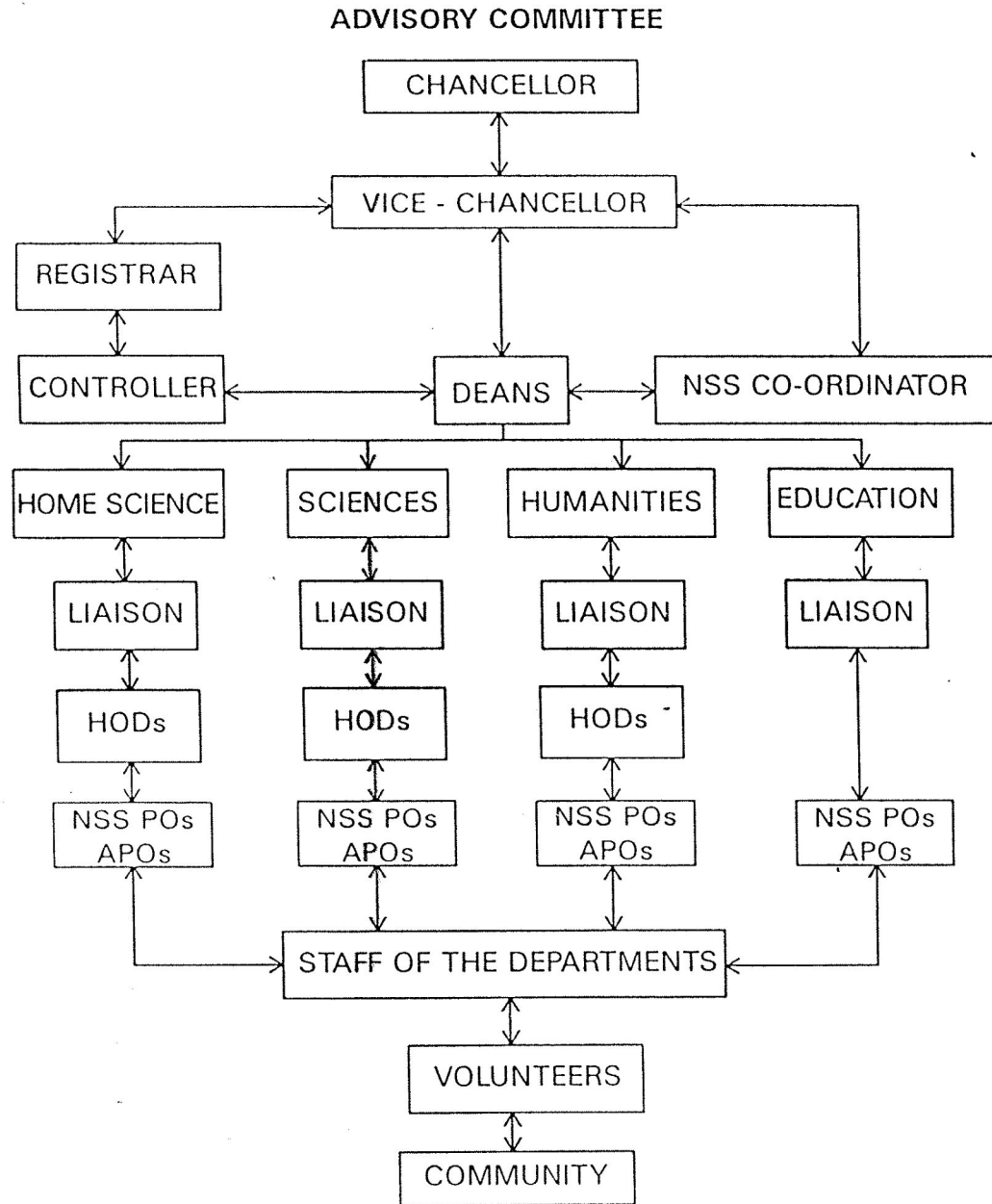


FIGURE 1

The unique feature has been to create the position of a liaison officer for each faculty to be held by a senior staff of one of the departments in the faculty. They monitor the implementation of the programme by the NSS units allotted to their respective faculties and guide the Programme Officers and other staff assisting in the programme.

Syllabus

The syllabi for NSS prepared by a special Board of Studies and approved by the University Academic Council, consist of theory as well as practical component (Enclosed). Each teacher is provided with a guide book covering the topics in the syllabi.

Training and Orientation

With the help of the Training and Orientation Centre, Sri Avinashilingam Education Trust Institutions, special orientation programmes are arranged for the Programme Officers and Assistant Programme Officers to equip them to undertake NSS as a curricular component.

Modalities of Operation

Regular Activities

Two hours are allocated for NSS in the weekly time table. The hours are distributed throughout the week for the different classes.

Training in 'Yoga' and campus cleanliness and beautification are the activities undertaken by the first year NSS.

The focal thrust for the II and III years is on the Anganwadis of the Integrated Child Development Services (ICDS) Programme in Coimbatore Corporation.

Programmes are chalked out to foster total development of the areas, utilising the Anganwadis as fulcrums for pre-school education, nutrition and health education for the children and their parents, total immunization of all eligible children, resource and infrastructure mobilisation from the Corporation and District Development Departments, women's empowerment through organising and strengthening Self Help Groups and eliciting community participation and responsibility for follow up.

Special Camps

From 1991 -1995, the special camps for 10 days for 50 per cent of the volunteers from each unit were conducted in the slums where Anganwadis were located. The theme for the special camps is selected as per the suggestions of the Government of India.

Attendance for NSS Theory Paper

As per the University norms, 90 per cent is the minimum attendance required for writing the comprehensive examination. This is applicable for NSS theory papers also. Those who have secured 80 - 89% will have to pay a condonation fee of Rs.50 per paper. Those who have secured 70 - 79% attendance will be permitted to take up the Comprehensive Semester Examination at the next supplementary Examination held in June. Those who secure less than 70% attendance should repeat the semester for NSS after completing the six semesters.

Pattern of Evaluation

The pattern of Evaluation in NSS is as follows :

year	Semester	Aspects	Marks	Total
I	I	Field work	15	
		Mid term test	10	
	II	Field work	15	
		Mid term test	10	
		Semester Exam	50	100
		NSS Paper I		
II	III	Field work	15	
		Mid term test	10	
	IV	Field work	15	
		Mid term test	10	
		Semester Exam	50	100
		NSS Paper II		
III	V	Field work	15	
		Mid term test	10	
		Field work	15	
		Mid term test	10	
		Semester Exam	50	100
		NSS Paper III		
		Special camp	80	
		Special activities	20	100
	Grand Total		400	

Break up for field work

Criteria	Marks
Attendance	5
Participation	5
Reporting	5
Total	15

Break up for special camp

Criteria	Marks
Attendance	20
Participation*	20
Leadership	20
Reporting	20
Total	80

***Participation is assessed on the following pattern :**

Criteria	Marks
a. Survey/fact finding	5
b. Programme planning	5
c. Resource mobilisation	2
d. Teaching aids	3
e. Implementation	5
Total	20

As for attendance, a minimum of 90 per cent is required (i.e., 9 days of the camp). The students who have secured 80 - 89 per cent, may not get marks for attendance but will be eligible to write NSS paper. Those who secure less than 80% attendance will have to repeat the camp with the next batch with a penalty of Rs. 500. However no marks will be awarded to her for the special camp.

Special Activity

The NSS, as per requirement, expects each student to give 240 hours of service. As per the NSS structure of the University, each student gives 180 hours (30 hrs/Semester) during the period of 3 years through regular activities and 60 hours (10hrs/Semester x 6 Semesters) through special activities, thus making the total to be 240 hours. Each NSS unit takes up two special activities of five hours duration per semester to make up the 60 hours.

The special activity can be conducted in the adopted area/village. The suggested special activities are, medical camp, health and environmental education, AIDS awareness camp, trekking, tree planting, cultural programme for awareness generation, kitchen gardening and educational exhibition.

At the end of the academic year, the students are awarded letter grades based on their performance and these grades are incorporated in their degree transcript.

Conclusion

- Feed back of the evaluation of NSS by the students, faculty as well as representatives of the community reveals the positive impact of this innovative

experiment of Avinashilingam University in fostering and promoting social change. This experiment has retained its credibility and legitimacy and also gained community support by addressing to their pivotal issues such as pre-school education, health, women's development, technology adoption, capacity building and community leadership, all of which would enhance the quality of life of the mass.

Every year the NSS is also evaluated from the point of view of the students as well as the teachers using specified schedules. This evaluation has confirmed that the latent talents of the students which do not surface in the normal class room situation such as decision making, team work, managerial skills, leadership, sense of responsibility, ability for oral and written presentation, positive attitude towards the downtrodden etc are brought out and enable the students to become worthy citizens.

APPENDIX II

INTERVIEW SCHEDULE TO ELICIT INFORMATION FROM THE ANGANWADI
WORKERS

1. General Information

Name of the Interviewer :

Name of the Interviewee :

Anganwadi Centre No. :

Location of the Centre :
and Project No.

Address :

Year of Starting :

2. Details of Functionaries

Name of the functionaries Age Experience Training

3. Details of Coverage of Target groups

Beneficiaries Number in Number covered/difficulties
 the area

4. Preschool Education

Give the daily routine in the Anganwadis

Teaching aids used

Play equipment

Games taught

5. Give details of immunisation and health check up done

Target groups

Immunisation/
Health checkup

Agency
assisting

How many cases did you refer to hospitals ?

6. Nutrition and Health Education in the Anganwadis

Target groups/Number

Messages

Methods

APPENDIX III

PERFORMANCE OF ANGANWADI CHILDREN IN THE NON-FORMAL
PRE-SCHOOL EDUCATION ACTIVITIES

SCHEDULE TO BE FILLED IN BY THE STUDENTS, PROGRAMME
OFFICERS/STAFF INCHARGE/ANGANWADI WORKERS AND MOTHERS OF
PRE-SCHOOL CHILDREN

Centre Number

Project

Name of the Anganwadi Worker

1. List the activities taught under NFPE

2. What are the teaching methods used for NFPE ?

3. What are the benefits of the non-formal pre-school education?
 - a. The children are able to sing with expressions
 - b. The children express their positive emotions in play (Eg. love for the peer group)
 - c. The children are able to tell stories correeey and in an interesting way (Expressions)
 - d. The children have understood the concepts clearly
 - e. The children are ready to enter the primary school

APPENDIX IV

OBSERVATION SCHEDULE TO ELICIT DESIRABLE HEALTH HABITS
ACQUIRED BY THE PRESCHOOL CHILDREN

(to be administered to the AWWs)

Name of the Interviewer :

Name of the Interviewee :

Anganwadi centre No. :

Location of the centre and
Project No. :

Address :

Year of Starting :

1. What are the health habits taught to the children ?

2. To what extent have children acquired health habits

Fully Partially Not at all

1. Brushing the teeth

2. Grooming the hair

3. Cutting the nails

4. Taking bath regularly

5. Dressing up in a neat
and tidy manner

What is the impact of NSS intervention ?
(to be answered after adoption)

APPENDIX V

INVESTIGATOR'S OBSERVATION PROFORMA AND SCORE CARD

Criteria	Scores assigned		
	5	3	1
Physical set up			
Utilisation of indoor space			
Utilisation of outdoor space			
Adequate light and ventilation			
Good flooring			
Neat walls			
Non-formal preschool education			
Enrolment			
Attendance			
Preparation of teaching aids			
Use of appropriate methods			
Conduct of creative activities			
Teaching appropriate songs and stories			
Conduct of readiness activities			
Supplementary nutrition			
Attendance in the noon meal programme for children			
Attendance in the noon meal programme for pregnant and lactating mothers			
Hygienic food habits of children			
Desirable cooking methods			
Supervising noon meal programme			

Criteria	Scores assigned		
	5	3	1
Health check up			
Conducting medical camps			
Conducting eye camps			
Distribution of folic acid and iron tablets to pregnant women			
Immunisation			
Immunisation camps for children			
Immunisation camps for pregnant women			
Referral services			
Identification of 'Atrisk' cases			
Referring 'Atrisk' cases immediatley to the hospitals			
Nutrition and Health education			
Conducting mothers meetings			
Appropriate messages conveyed in the meetings			
Use of teaching methods			
Motivating community for participation			
Participation in the Anganwadi activities			
Community contribution in moneye, material and labour			
Community participation in the national festivals			

APPENDIX VI

LEARNING EXPERIENCES FOR NSS STUDENTS
(to be administered to NSS students)

Name of the student :
Class : Date of administration
Anganwadi number :
Project :
Year of adoption

1. Activities carried out in the Anganwadi

a. Activities by your group

b. Activities you were involved in

2. What are the outcomes of your participation in the
Anganwadi activities (mention the benefits you had
received)

3. What are your suggestions for future ?

APPENDIX VII

COMPARISON OF SCORES ASSIGNED TO THE ANGANWADIS FOR THEIR
STATUS AND PERFORMANCE BEFORE AND AFTER ADOPTION BY NSS

Criteria	Number of Anganwadis N:100					
	Before adoption			After adoption		
	Scores			Scores		
	5	3	1	5	3	1
Physical setup						
Utilisation of indoor space	32	56	12	51	45	4
Utilisation of outdoor space	25	51	24	54	34	12
Adequate light and ventilation	32	54	14	52	40	8
Good flooring	26	21	53	67	14	19
Neat walls	23	28	49	63	23	14
Non-formal preschool education						
Enrolment	61	3	36	88	2	10
Attendance	53	18	29	91	4	5
Use of appropriate teaching methods	41	29	30	83	5	12
Preparation of teaching aids	50	22	28	79	17	4
Conduct of creative activities	32	11	57	66	25	9
Teaching of appropriate songs and stories	58	9	33	98	2	-
Conduct of readiness activities	64	18	18	91	1	8

Criteria	Number of Anganwadis N:100					
	Before adoption			After adoption		
	Scores			Scores		
	5	3	1	5	3	1
Supplementary nutrition						
Attendance in the noon meal programme for children	71	20	9	93	6	1
Attendance in the noon meal programme for pregnant and lactating mothers	34	11	55	90	4	6
Hygienic food habits of children	41	44	15	83	15	2
Desirable cooking methods	50	32	18	91	5	4
Supervising noon meal programme	23	46	31	74	14	12
Health checkup						
Conducting medical camps	58	31	11	91	8	1
Conducting Eye camps	24	17	59	77	12	11
Distribution of Folic Acid and Iron Tablets to pregnant women	38	21	41	75	13	12
Immunization						
Immunization camps for children	49	15	36	88	6	6
Immunization camps for pregnant women	41	13	46	84	9	7
Referral services						
Identification of 'atrisk' cases	19	39	52	68	16	16
Referring 'atrisk' immediately to hospitals	12	41	47	77	18	5

Criteria	Number of Anganwadis N:100					
	Before adoption			After adoption		
	Scores			Scores		
	5	3	1	5	3	1
Nutrition and health education						
Conducting mothers' meetings	61	26	13	78	12	10
Appropriate messages conveying in the meetings	41	36	23	74	10	6
Use of suitable teaching methods	24	30	46	68	11	21
Community participation						
Motivation community participation in the Anganwadi activities	33	41	26	88	4	8
Community contribution in money, material and labour	27	36	37	66	20	14
Community participation in the National Festivals	12	28	60	69	28	3