GARMENT MAKING AS AN INCOME GENERATING ACTIVITY FOR RURAL WOMEN

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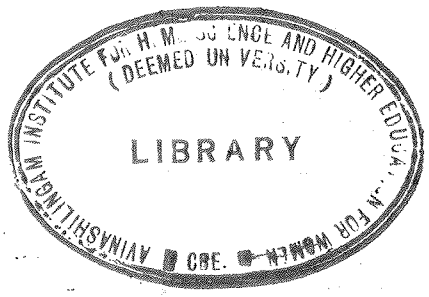

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I INTRODUCTION

India lives in her six lakhs of villages. Eighty per cent of the rural families depend on agriculture for their livelihood. Farming is their main occupation for about 190 days in the year. Along with non-farming occupations for about 30 days they get an annual per capita income of Rs.110/- per year. Agriculture being a seasonal occupation total unemployment prevails for about 140 days per year. Dhar (1978) as cited by Singh and Singh (1981). This makes India one of the poorest in the world, ranking 106th in terms of per capita incomes in the U.N.Family. The number of people living below the poverty line happens to be 317 millions of which 260 millions belong to the rural sector (UNICEF, 1981).

The population of India is ever on the increase. The latest statistics show that the bottom line of Indian population is 683.8 millions, an increase of almost 25 per cent since the last census, a decade ago (Saari, 1981). Increase in population has led to the increase in labour force with low living standards and poor socio economic conditions. In spite of the Five Year Plans aimed at industrialisation of the country, only 10-15 per cent can be absorbed in the industrial sector. As a result, the rural economy is characterised by low productivity, sizable unemployment and under employment, social injustice and inequality

with inadequacy of different infrastructural facilities. No nation in the world committed to democracy has faced such a formidable task as India to eradicate poverty.

India's commitment to eradicate poverty and provide the masses with an opportunity to work and earn enough to meet their basic needs, will succeed to the extent the efforts taken by leaders for transformation of the traditional society, the attention given to planning and implementation of strategies for change and the selection of technologies that will contribute to the development of a just and sustainable society, are adequate (Ensminger, 1979). Gandhiji's formula for accepting, advocating and applying technology was that it should be capable of being used by most of the people and beneficial to the majority. The only ways in which the less developed countries such as India can solve their problem of employment is through labour intensive technology asserts Mc Nemara, (Ravi, 1980).

The solution to India's economic problems lies in paying greater attention to agriculture, and cottage industries (Singh, 1979). Village and small sector units alone can help to remove poverty, solve the unemployment problem, and reduce the existing income disparities. In this context, Gandhi's (1980) advice on 20 point programme, with its action oriented package plan, can be expected to raise the living standards of the people, specially the weaker sections of the society.

The major objectives of development as accepted by planners and the government include growth, employment, social justice, spatial coordination and quality of life. Rao, (1980). Integrated development means development that takes into account all these objectives and tries to link them together through plans, programmes and policies that are followed for the promotion of development.

Expansion of employment and reduction of under employment being the most pressing problem of the nation, the V Plan aimed at removal of poverty. Its emphasis was on the creation of additional employment opportunities particularly for the weaker sections through special programmes, (George, 1980).

The VI Plan document aims at achieving agricultural and rural development, full employment in rural areas and removal of poverty within the next ten years through the Integrated Rural Development Programme. The IRDP is specially focussed in the target group comprising small and marginal farmers, agricultural labourers, rural artisans, whose economic improvement is considered to be one of the most important concern. The strategy is to combine the agricultural programmes with the plans for cottage and village industries and make it into a comprehensive development programme so as to bring about a more balanced development of the rural economy. Growth with redistributed incomes has

thus come to become the paramount goal of Integrated Rural Development (Adya and Lahoti, 1980).

As Devadas (1976) states the ultimate aims of the Indian planners and policy makers is economic growth with social justice. The strategies for economic growth are eradication of poverty, self-reliance, combating malnutrition, control of population, education of the masses and development of a scientific tempo and promotion of science and technology in the rural areas. The goal of development is to put to maximum use the available resources so that the living standards of a large sector of the population is raised. In this huge task Indian women have a great role to play since they constitute half the nation's population. Women shoulder several major responsibilities in the home, farm and the community. Hence they are indispensable for the development of the society. Unless women take an active part in socio economic development, the country cannot march forward, (Bhattacharya, 1978).

The attitude of the Indian society towards women's problems and education has not been wholesome, but rather discriminating. That the role of women in the society is not recognised has not only affected their education adversely, but also restricted their effective participation in the programmes of national development (Hindu, 1979). The literary rate of rural women forming 50 per cent of the

total population happens to be 13 per cent (International Women's Year, 1975). A vast majority of the Indian women are backward, steeped in ignorance and superstition. Legally they have complete equality with men, but unless the large masses of women are educated and enabled to take their rightful place in the society the equality granted to them would be illusory (Reddy, 1979).

The effectiveness of the participation of women in the process of national development depends on the quality and type of education imparted to them. A well organised system of non formal education tailored to suit the needs of people involved in different kinds of activities is a crucial need for giving women the knowledge and skills necessary for their improvement, (Avinashilingam, 1977). The need for closer linkage of the educational system with employment opportunities has been recognised as necessary to cater to the development needs of the country. Apart from trained manpower for various sectors, provision of marketable skills to job seekers assumes significance. Hence currently steps undertaken for improving the position of women in India aimed at eradication of illiteracy, increase productivity and economic self-reliance.

Jai Shanker (1979) points out, there is a relationship between education and economic participation. It has been observed that education promotes female employment. The

unemployment rate among women of all age groups taken together was 7.01 per cent against 3.07 per cent among men. In the most productive age group 15-29, the problem was more critical as it was 11.61 per cent against 6.81 per cent among men (Hindu, 1981). This shows the unfavourable position occupied by women in the employment sphere. Even though rural women shoulder abundant responsibilities and perform a wide spectrum of duties related to the farm and the home, their labour is never computed in economic terms. Women are generally employed in very low earning sectors demanding hard work, and low skill and technology. Female participation is found in industries related to textiles, tobacco products, forestry, wood products characterised with low remuneration, low skill and high labour intensity thus jeopardising their socio-economic position and preventing them from acquiring job oriented skills, (Mitra, 1979).

Reservation for women, education and training in improved technology and technical education has been recommended by Mitra et al., (1979) in selected household industries where female employment is practicable and these among others include sewing and professional establishments. The study group on Home and Rural Industries (1979) recommends that employment among women can be created in production and processing sectors and also in servicing sectors but priority must be given to illiterate women and dropouts in the planning of such programmes.

Women find a place in many of the areas organised by the Khadi and Village Industries Commission. In activities where feminine skills and artistic talents are demanded there is a greater participation of women. In Khadi, spinning cotton is mostly done by women in Ambar Charka units. In both the Khadi and Handloom weaving women assist in the processing and production centers and find a significant place. They are absorbed in sericulture on a cooperative basis (Khadi and Village Industries Commission, 1979).

Some voluntary organisations in India undertake selected welfare schemes. Among these the Central Social Welfare Board and the Bharatiya Grameen Mahila Sangh provide a number of programmes for the development and uplift of women, such as condensed courses, vocational training courses, socio economic programmes for needy and handicapped women. During the VI Plan period, at least one lakh of needy women are expected to be provided with employment under the socio-economic programmes of the CSWB (Social Welfare, 1978). From less than 2 lakhs in 1959-60 it had a growth rate to Rs.2.35 crores in 1981 (Rohtagi, 1981).

Giri (1978) points out that during the off-season periods there is large scope for village industries particularly labour intensive projects with low capital investment, can provide employment with high standards in production of essential consumer goods which can attract the Indian and foreign markets. One such industry is the readymade

garment industry providing immense scope for gainful employment for trained women.

The development of the garment industry which still is at its infancy has led to widespread employment of women in their homes and community. Some entreprenurs employ as many as two to three hundred women in piece work basis, while hundreds of others make laces or embroidery in different centres of the country. Very often a small operator with not more than ten sewing machines operating from his own home has a turnover of a lakh of rupees a year catering to India's growing ready-made garment requirements. (Baig, 1976).

Most of the garment units of India are small suburban units occupying space varying from 150 to 200 sq. metres in the metropolitan areas. Within such small space large labour force of 50-60 workers consisting of an even mix of skilled tailors, master cutters and unskilled helpers are employed. Ninety per cent of the work force in such units is female labour (Shah, 1980). Decentralised garment manufacturing is at present confined to exporters with limited resources. The export of approximately Rs.400 crores of garments per annum is the joint effort of more than 2000 entrepreneurs who are widespread throughout India (Shah, 1980). Despite its scope for a high export potential and earning of foreign exhange, the garment industry has not been able

to prosper and grow due to constant neglect and the multifarious impediments in its development.

Clothing comes second in the triumvirate of fundamental necessities, next to food only. However it has not gained adequate recognition, considering the low standards of living of the rural masses, who are forced to spend nearly 90 per cent of their hard earned income on food. Nevertheless, the clothing industry can provide jobs particularly to the womenfolk who apart from sewing in several garment factories will also be able to make or augment their livig through self employment in their homes (Garments India, 1980).

Integrated Rural Development Programme is to raise the income of 3000 families who are below the poverty line (Kurukshetra, 1981; Sinha, 1981). Since one of the major objectives of the IRD Programme is employment generation and consequent income generation and since the family is the unit of planning and production, garment making can be promoted as a home based industry in every IRD Block. An effort is made in this direction by giving needy women short training courses in tailoring, and the government has approved the schemes for purchasing sewing machines in the blocks. Tamilnadu being one of the important centres for the production of Khadi and handloom fabrics garment making can be taken up in the 161 blocks adopted for the IRD programme in VI Plan.

With a population more than 680 millions for whom clothing is a fundamental necessity India has a great potential for readymade goods. There are very few trained designers, master cutters and skilled tailors equipped for garment making as an industry. A dire need exists for training facilities, particularly for designing garments according to the latest trends in fashions both in India and abroad, for cutting garments in a massive scale, involving economic use of labour (SITRA, 1979; Velsankar, 1977).

The physical stature of men, women and children vary from place to place. Sizing of the garment is a very important aspect for those who are manufacturing garments. Excellent guidelines are available from publications for those who are exporting ready-made garments to countries such as the United States of America (Mehta, 1980). In contrast reports of the few studies conducted by the Textile Committees in the various states of India on Consumer preferences and purchases reveal that readymade garments while high priced, reflect improper fitting and poor stitching aspects. The appearance and finish of such garments depend on accurate fitting and skilful stitching.

To achieve the above, paper patterns are fundamental. The idea of designing patterns out of paper to enable any one to make garments originated from Buttericks in the USA and women have been fascinated by paper patterns to make

themselves clothes. Patterns in graded sizes were cut out in tissue papers and the Butterick magazines always reported the latest fashions. These patterns are widespread in the capital cities of the European countries. (Clothing Journal, 1980). The enormous number of paper patterns sold in the western countries is an indication of the needle women's appreciation of pattern making. The need for such paper patterns formulated out of standardised body measurements for different age groups is crucial.

A paper pattern helps one to obtain garments of good appearance, and correct fit. However it is regrettable that very little research work has been conducted in this area in India (Kohli, ISI, 1979). The scope for design manipulation in the area of children's clothing is great since the trend for stitched wear is pronounced among the younger gendration. Similarly studies on consumer preferences conducted in selected garments or on preschoolers as a basis for standardising body measurements and formulation of paper patterns, are very much needed. Hence an attempt has been made in this study along these directions. Body measurements were standardised for selected women's garments for formulating paper patterns. Also for the preschoolers for the purposes of designing patterns for dresses, measurements were standardised.

Since the aim of the IRD programme is to generate employment opportunities in the rural areas this study was planned for the most productive age group namely young girls from selected villages. They were provided vocational training in garment making. The educational programme was evaluated in terms of development of skills, knowledge, interest and aspirations. Training was administered to produce a few selected garments using the formulated paper patterns. Sale of goods was promoted and orders from consumers were invited. The feasibility of the garment unit as an income generating occupation for young girls in the villages was assessed. Also consumer reactions towards the produced readymade goods were studied.

Review of Literature

II REVIEW OF LITERATURE

The literature relevant to this study has been reviewed under the following major heads:

A. The Community Development Programme in India

B. Integrated Rural Development

C. Women and Development

D. Unemployment and Cottage and Village Industries

E. The Garment Industry in India--Problems and Prospects

F. Standardising Body Measurements, Size Formulation and Pattern Making and

G. Consumer Preferences and Purchases of Clothing

A. The Community Development Programme in India

India lives in 5,00,000 villages with 80 per cent of the population engaged in agriculture, which holds the key to economic development. On this depends the success of national development plans, growth of industries, living standards, education and the health of the people (Barooah, 1970).

The Constitution laid down "The State shall strive to promote the welfare of people by securing and promoting as effectively as it may a social order, in which justice, social, economic and political, shall inform all the institutions of national life". When the new constitution came

into effect from January 26, 1950 India declared that the objective of the nation was the establishment of a "Welfare State" (Shersingh, 1975). Any attempt to bring about an all round improvement of the villages and those who inhabit them should not only be welcomed, but given all possible encouragement by the state and the people (Prasad, 1952).

Development of India cannot be conceived without the development of villages (Singh and Sahay, 1972). In the words of Mahatma Gandhi, "If village perishes, India will perish too. India will be no more India. Her own mission in the world will get lost". The concept of the Community Development (CD) Programme is not new in India. It is often said, that Community Development Programme is an old wine in a new bottle (Dayal, 1960). Prior to Independence in 1947, rural development work was casual and sporadic attempts were made both by voluntary and government agencies. Reference can be made to the workers trained by Mahatma Gandhi at Sewagram (1931) or post Tagore at Sriniketan (1911) or Spencer Hatch of Y.M.C.A. (1928) at Marthandam or the experiments conducted by Brayne in Gurgaon district in Punjab (1920). After Independence the attention of the Government was drawn to the development of villages. In later years, the Etawah Pilot Project (1948), Nilokheri Experiment (1948), Sarvodaya Scheme (1950), Grow More Food Campaign (1949) and the Firka Development Scheme at Madras (1947) were the earnest attempts connected with rural reconstruction work (Ministry of Community Development and

Cooperation, 1963). Gandhi had dedicated his life and activities towards achieving "Ramarajya" a state in which all had their minimum requirements fulfilled. His aim was to rebuild all aspects of rural life, physical, economical, political and social, and he emphasised that the last man should be the first to benefit the philosophy of Antyodaya (Indian Farming, 1978). The Gandhian philosophy of the village as being the nerve centre of the people's universe gave shape and commitment to the C.D. programme, with the village as the focal point. The earlier attempts in rural development had obvious limitations and outof pooled experiences as integral feature of the Five Year Plans the CD Programme dawned (Ministry of CD, 1958). It was the recommendations of the Grow more Food Enquiry Committee after independence, which set Government of India, to action in launching CD Programme in India (Krishnamachari, 1967).

The C.D. Programme aimed at all round development of villagers. It was launched on October 2, the birthday of Mahatma Gandhi, to awaken the villagers from mental and physical inertia, and to create in them a determination to eradicate evils of disease, poverty and ignorance and to achieve the fruits of freedom as economic security, social justice and spiritual uplift. To quote Jawaharlal Nehru "Nothing has happened in any country in the world during the last few years so big in content and so revolutionery in design as the CD Programme in India. They are changing

the very face of rural India" (Ministry of CD and 1958). The greatest asset of India is her manpower. With men and material on hand what is needed is the breaking of the vicious circle. "Muscles can do it, muscles can be trained to do it, and conditions can be created to do it" (Dey, 1960).

Community Development is the objective and Extension the method through which the objectives are to be achieved (Dahama, 1968). It is a recognised rural development programme, with a dynamic role of community and community organisations, mobilising local groups, organisations and institutions as youth clubs, mahila mandals and cooperatives (Shiwalkar, 1968). Community Development therefore must have abiding faith in democracy, eliciting the whole hearted support and participation of millions of poverty stricken people (Bhattacharya, 1970).

The objectives of the Community Development and the National Extension service, subsequently introduced is to assist the villages in planning and carrying out an integrated multiphased family and village plans, directed towards increasing agricultural production, improving village crafts and industries, and organising new ones, providing essential health services and improving health practices, providing required educational facilities for children and an adult education programme, providing recreational facilities and programmes, improving housing and family living conditions and providing programmes for village women and

youth (Ministry of CD and C, 1962). The high response of the people necessitated the government to rapidly expand the programme for the coverage of the entire country through the C.D. Blocks (Ministry of CD and C, 1959).

In 1957, the Bâlwantray Metha Team recommended democratic decentralisation, the establishment of statutory elected local bodies Panchayati Raj institutions, (Village Panchayats, Panchayat samithies at CD Block level and Zilla Parishads at District level) and devolution to them the necessary resources, power and authority (Ministry of CD and C, 1962).

For the foundation of the country to become strong the three basic essentials of a village are the Panchayat, the Cooperative and the School, views Nehru (1959). The Panchayat as the statutory administrative institution is to provide the much needed leadership, for planning and execution of all development activities, the village cooperative as the economic wing, is to look to the economic needs of the community by promoting self interest through mutual help. The village school functions as the centre for all cultural activities radiating knowledge, wisdom and vitality in all spheres of action. The three basic institutions are to cater to the needs of the village, food, clothing, shelter, education, sports and culture. Similar organisations, at block, district, state and national levels

complement one another and the combined efforts of all these enable democracy to function effectively leading to the establishment of a welfare state (Ministry of CD and C, 1962).

The salient features of Panchayati Raj is complete integration between Community Development and local self government. The philosophy and objectives of Panchayati Raj and CD do not vary, rather they complement and supplement each other and together they act as the most dominant forces of rural socio economic change in India (Subramanya, 1977). This was in realisation of Gandhiji's dream of village swaraj which is a complete republic, independent of its neighbours for its vital wants and yet interdependent for many others where dependence is essential (Sanyal, 1977). The entire rural development and welfare programmes are channalised through these three tiers of Panchayati Raj system (Sanyal, 1975). Panchayati Raj covers now all the states and at present there are 2,22,055 villages panchayats, covering a population of 44.31 crorers. In addition, there are 4,028 Panchayat samithis and 262 Zilla Parishads (Government of India, 1979).

Out of many factors contributing to India's development effort, cooperatives offer a great potential to rural development. The national plans paved the way for their meaningful contribution in economic and social development. The main areas where the cooperative institutions can

function are in the fields of farming, credit, warehousing, marketing, and small scale unit establishments. The government already recognises the role of cooperative institutions and is aware of the need to strengthen them (Dasgupta, 1978). At present over three lakh cooperative societies are in operation with a total membership of seventy million (Mehta, 1978).

The uniform pattern of the CD Programme continued from 1952-1960. The programme has made a positive contribution to the economic and social development of rural India, by implementing various programmes, including the spread of modern agricultural technology and ushering in green revolution through extension service (Azad, 1978). However it failed in the fulfilment of its basic aim to generate community efforts and unite the same with those of government towards bringing about improvement in economic, social and cultural status in the rural community (Chattopadyay, 1978).

To accomplish rapid breakthrough in agricultural production, Integrated Area Development Programme was introduced in 1960-61 and this was extended to larger areas in 1964 as Integrated Agricultural Areas Programme. To improve package of practices the High Yielding Varieties Programme was adopted in 1966-67. To improve milk production Integrated Cattle Development Programme was initiated in 1964-65. For the upliftment of the weaker sections of

the society, a series of special programmes have been launched. The Drought Prone Areas Programme was started in 1970-71 for stabilising the income of weaker sections. During the same period Small Farmers Development Agencies were formed to benefit small and marginal farmers and agricultural labourers. The programme covers 1800 blocks in 198 districts. Similarly the Hill Areas Development Programme (1973-74), Tribal Areas Development Programme (1971-72) Whole Village Development Programme (1975-76), Command Area Development (1974-75), and Voluntary Action Scheme (1974-75) have been undertaken benefitting millions of rural people. Many new institutions also came up to support the rural development movement. To crown these efforts the banks were nationalised in 1969 thus facilitating the availability of credit (Prasad, 1978).

To create gainful employment and strengthen the rural infrastructure the National Rural Employment Programme (NREP) originally known as the Food for Works Programme started in 1976-77 is another recent attempt by the Government (Govt.of India, 1981). The National Scheme for Training of Rural Youth for Self Employment (TRYSEM) is a Central Government Scheme launched in 1979. Under this scheme rural youth are equipped with skills and technology to enable them to take up self employment activities (Kau, 1980).

Experience of all these programmes of rural development showed that these were of sectoral approach and inadequate to bring about an overall development and to ensure the benefits to the local population particularly to the weaker sections of society. The incidence of unemployment and poverty and potential for development of agriculture varies widely from region to region. Efforts were found necessary to make the programmes more specific and utilise all local endowments for growth of social justice and full employment (Barnala, 1978).

India's rural development programme tried to achieve functional integration by establishing an integrated staffing pattern at block level. It was expected the interaction among such an interdepartmental team will also lead to an integrated development of the rural areas, but by and large this had not happened (Sen et al., 1975). For this state of affairs, a number of factors are responsible view Juneja and Mathur (1979). These include 1) the institutional structure prevailing, in our rural economy leaving small farmers without any monetary benefit. They are faced with such difficulties as obtaining credit, buying inputs and selling their produce and so there is need for institutional reform. 2) Areas need different emphasis and programme formulating bodies in each area must possess the freedom to tailor them to local conditions. 3) The segmented approach of certain programmes calls for uninterrupted approach.

4) There is a need for coordinated working of the number of agencies involved in the implementation of developmental programmes. A total view of the programmes for the rural poor and coordination can best take place within the framework of an integrated plan for a specific area. Thus the recent emphasis in block level planning and Integrated Rural Development are steps in the right direction.

B. Integrated Rural Development

1. Poverty in India

The major social problems of India are poverty and unemployment. The poverty of large striations of rural society has been a crying problem even in the United States of America (Eswaraiah, 1973). According to Gillin and Gillin as quoted by Mahalanabish (1978), "poverty is that condition in which a person either because of inadequate income, or unwise expenditure does not maintain a scale of living to provide for his physical and mental efficiency and to function usefully according to the standards of society, of which he is a member."

Mc Namara, as President of the World Bank defined poverty as a state of living, so degraded by disease, illiteracy, malnutrition and squallor that it denies the victims, the basic human needs. Applying this definition, the World Bank has come to the conclusion, that 50-70 per cent of the total population living in all developing

countries are poor. Elimination of poverty is a gradual and continuous process (Narasimhan, 1973). In our national efforts towards removal of poverty, development of backward areas assumes vital importance. Poverty in India is often associated with unemployment. The lack of adequate employment opportunities for its adult members, and a low earner dependent ratio are the characteristics of poverty.

Forty per cent of the rural population and 50 per cent of the urban population are living below the poverty line in India. Nearly 232 millions of rural population are under poverty line (Subramanyam, 1975). The National Council of Applied Economic Research suggests that 50 per cent households share 82.5 per cent of India's aggregate income while the rest get only 17.5 per cent. This shows the dimension of unequal distribution of income. In terms of actual amount, more than 57 per cent of the households in the rural areas and 39 per cent in the urban areas have to maintain themselves with less than Rs.100/- month. A person is on below poverty line if his income is Rs.20/- month at 1960 price level or Rs.40/- at 1972 price level. Applying this yardstick, 220 million people are living below poverty line (Gosh, 1977).

According to the data available from the 18th round of the National Sample Survey, 34 per cent of India's population live below the poverty line, and 22.4 per cent or every fifth person is a destitute. These figures of

poverty are alarming (Verghese, 1977). The poverty sector in rural India comprises mainly the small and marginal farmers, landless labourers, share croppers, tenants, low earning artisans, tribal people, the aged and the infirm. The NCA has estimated that the total labour force would increase from 139 million in 1971 to 250 million in 2001, against an increase in the rural population of 229 million from 438 million in 1971 to 667 million by 2001. The total rural force would increase by 111 millions at the turn of this century (Patel, 1978). The causes of poverty are many but the root causes of this problem of social life are few in numbers as pointed out by social scientists and economists. The twin causes of poverty as put forth in the V Plan document, is underdevelopment and inequality in incomes and wealth. The number of poverty stricken people in India is more than thrice than in the rest of the countries. The causes of poverty include: unwise economic policy, unequal distribution, unproductive holdings, economic depression, overpopulation, unemployment and underemployment and traditional pattern of village life. Poverty is a barrier to economic prosperity. (Mahalanabish, 1978; Verghese, 1977; Viswanathand Prasad, 1973). The Draft Five Year Plan for the VI Plan (1978-83) estimated current unemployment as 20.6 million person years - 16.5 million in rural areas and 4.1 million in urban areas (Azad, 1978). The number of job seekers in Employment Exchange rose to 9.77 million in December 1976 from 9.33 million in 1975 and crossed the 10 million mark in 1977 (Gupta, 1977).

The causes and extent of such unemployment are rapid increase in population, slow rate of economic development, phenomenal expansion of educational facilities, defective system of education, and backward agriculture. In the rural sector, unemployment in the form of underemployment exists in a massive scale. (Radhakrishnan, 1978; Mukherjee, 1978). The problem has reached unimaginable proportions. In developmental planning, solution to the unemployment problem must be the central policy and given priority (Kehal, 1975). Despite the fact that four Five Year Plans have been completed the extent of poverty has not diminished. The breakthrough in agriculture has not helped in reducing poverty (Kehal, 1973).

The major thrust of the V Plan is growth with social justice. Reducing poverty is not only an economic issue now, but a social and political necessity. The objective of planned development in our country would not be merely an increase in national income but also to meet the minimum needs of the poor (Kehal, 1973).

The commitment of the Government of India as set forth in 1978-83 Five Year plan is to remove the conditions that create poverty. It is essential to explore the reason for more than half of India's 640 million people, most of whom rural, been bypassed by development. The root-cause is that the rural poor are not organised. Unless the poor are organised for the purpose of achieving economic and

social achievement, it will be difficult if not impossible, to reverse the trend toward further institutionalisation of the elite minirity and the poor majority (Ensminger, (1979).

Our national objectives, justice, liberty, equality and fraternity are possible only in a society in which there is no grinding poverty and all have the means to live and work. Hence the biggest problem facing the country is avoidance of poverty and providing the means for a living to poor millions, which can give them at least two square meals a day, clothing, shelter, and opportunities for a minimum education for their children. (Avinashilingam, 1968). According to Sukatme about 25 per cent of the urban and 20 per cent of rural population are severely malnourished. This emphasises the need for social security measures which can insulate the economically handicapped sections of the society from want in the basic needs of man like food, clothing, energy and shelter. Unfortunately, there are only very few projects, particularly in rural areas which have grown on their momentum when the external input is withdrawn (Swaminathan, 1976). Experience gained under various types of projects has pointed towards the need of a more aggressive strategy for the generation of employment opportunities. Hence it has been decided to lay emphasis on optimum utilisation of local resources - human, biological and natural, through purposeful applications of science and technology, for the benefit of the rural poor (Sharma,1977)

The greatest challenge is achieving self-replicating economic growth, which can provide gainful employment to everyone. If the employment situation in rural areas imprwves the drift into towns and cities will slow down and to that extent urban employment also will become manageable (Gandhi, 1976).

2. Need for Integrated Rural Development

In the VI Plan, a new emphasis has been laid on Integrated Rural Development Programme (IRDP) which seeks to bring about optimum development of the people and the area by utilisation of the available resources. The aim of IRD is to improve the quality of life of the rural poor by translating into action the national objectives of full employment and removal of destitution from the country within a definite period of time. IRD can succeed only if the people are actively involved and participate in it. Therefore the planning and implementation of the programme must be carried on with the assistance of the people. If they are enthused about the projects which seek their welfare, the pace of progress towards removal of destitution from their midst can be hastened (Desai, 1978).

A total outlay of Rs.1,16,240 crores has been proposed for the plan period 1978-83. The major objective of the plan is to achieve substantial progress towards full employment, to eradicate poverty and creation of more equitable

society. Removal of unemployment and under employment, an appreciable rise in the standard of living of the poorest sections of population, provision to meet the basic needs of people in low income groups within ten years are the principal objectives of planning. These primary objectives would be attained while achieving a higher rate of growth of the economy and moving towards significant reductions in the present disparities of income and wealth and ensuring the country's continued progress towards self-reliance. For achieving these objectives, the Plan emphasises four areas; agriculture, cottage and small scale industries, area planning for IRD and provision for minimum needs (Draft Plan, 1978-83; Kurukshetra, 1978).

The main objective is to achieve a higher growth rate in the agricultural sector fixed at 4% per annum and increased avenues of employment for the unemployed and underemployed in the rural areas. IRD has been accepted as the effective means to reach this goal which is based on the concept of growth with social justice. The focus of IRD must be on the target groups comprising small and marginal farmers, share croppers, agricultural labourers and rural artisans (Menon, 1978).

3. What is Integrated Rural Development?

Integrated Rural Development in the Indian context, is integrated development of the areas and the people through optimum development and utilisation and conservation of local resources - physical, biological and human. This can be brought about by bringing about the necessary institutional, structural and attitudinal changes, and delivering a package of services to encompass not only the economic field, that is, agriculture and rural industries, but also the establishment of the required social infrastructure and services, in the areas of health, nutrition, sanitation, housing, drinking water and literacy, with the ultimate objective of improving the quality of life of the rural poor and the rural weak. IRD thus implies functional, spatial and temporal integration of all the parameters. It is a multifaceted framework involving a multi disciplinary approach. In this process, self help and community participation play a paramount role. IRD could be described as an attempt to implement Gandhiji's concept of Sarvodaya promoting the welfare of each and all individuals in the rural community. At the same time, it ensures accelerated development and welfare of disadvantaged groups. Amongst them the poorest of poor will receive priority - Antyodaya 'upto last' and the start has to be from the bottom (Azad, 1978). Political will and professional skill must combine effectively to provide the breakthrough. Professional

scientists and technologists have a vital role to play in achieving rural transformation. Their first step is to prepare a scientific balance sheet of the developmental assets and liabilities of the selected rural area. An analysis of this rural balance sheet will help to identify the developmental opportunities that exist and the bottlenecks that have to be removed. The next step is to convert these developmental opportunities into a portfolio of economically viable projects in consultation with local people, bankers and administrators. It is at this stage that Antyodaya concept becomes especially relevant. Only those projects which will help to increase the purchasing power of the rural poor should be taken up by government and voluntary agencies for immediate implementation (Swaminathan, 1979). The village is the nucleus of economic development. The Planning Commission has proposed that 25 per cent of the total VI Plan outlay should be allocated exclusively for employment schemes so that rural poverty could be eradicated (Venkatachary, 1977). IRD is a strategy package seeking to achieve enhanced rural production and productivity greater socio economic equity, a spatial balance in social and economic development and broad based community participation. It is a dynamic concept ever changing with respect to the conditions and requirements of the rural economy.

The strategy of IRD as outlined by Subramanyam (1976) aims at a systematic scientific and integrated use of all

natural resources enabling every person to engage himself in a productive and socially useful occupation. The principles of the new strategy are:

1. Full employment of labourand physical resources
2. Setting up of agro industrial complexes
3. Laying down of minimum standards of productivity
4. Minimum standards of performance by public agencies and
5. Thinking in terms of scientific approach

To achieve the objectives outlined above the course of action and approach suggested are:

1. To make a coopdinated endeavour to prepare a comprehensive inventory of available resources
2. To pay attention to land reforms and use, timely supply of seeds of proper quality, irrigation and water management, and
3. To promote rural industries with competent management and sustained marketing outlets

To popularise the comprehensive programme the concrete line of action has the following steps:

1. Setting up of a coordinating and guiding body at the level of central and state governments that can develop ideas and tap resources
2. Establishing research development centres at local levels for extension of appropriate technologies in agriculture and agro-related industries along with wide range of activities
3. Systematic involvement of educational, institutional credit and marketing agencies and extension organisations in these range of activities and

4. Mobilisation of local initiative and participation in the task of rural reconstruction

A working group consisting of representatives of the Departments of Rural Development, Agricultural Research and Education (DARE), Science and Technology (DST), Planning Commission and Council of Scientific and Industrial Research (CSIR) was set up in May 1976 to select at least one district in each state for initiating an IRD project. The programmes will not have rigid structures, instead each action plan should be tailored to suit local needs, resources and priorities, based on the participation of local community.

For preparing a comprehensive programme with a view to providing gainful employment to the rural poor, and thereby increasing their purchasing power 20 districts with different socio economic and ecological conditions were selected (Sharma, 1977; Barnala, 1977).

To achieve the national objective of providing full employment to people out of the 3000 blocks already covered by SFDA, DPAP or CAD it was proposed to select 2000 blocks for intensive development in 1978-79. Also it was proposed to select 300 blocks not having any special programmes, every year in the VI Plan period for IRD. Thus 40 per cent of the blocks would get covered under the IRD by the year 1983. (Azad 1978) and (Chattopadayay, 1978).

The VI Plan strategy for IRD envisages covering all the 5100 blocks under the programme. By the end of the Plan, full employment would have been substantially reached in 2000 blocks, In another 1500 blocks the work would be in various stages. This would leave 1600 blocks for the next five year period, starting in April 1983. Full employment would be reached in 3100 blocks by 1988. The successful implementation of the scheme on a time bound basis will depend on the existence of agencies for planning and implementation at the Block level (Joshi, 1978). Thus IRD to be successful, has to keep in view the programmes, bureaucracy and other implementing agencies and the people and the people's institutions (Azad, 1978).

The Ashoka Mehta Committee suggested the district to be the first point of decentralisation below the state level. It also felt the need of an institution to provide popular participation and supervision in the management of new demands of development emerging in the context of growth centres, rural urban continum, and marketing which require local level programme. It envisages Mandal panchayat, consisting of a cluster of villages and covering a population of 15,000 to 20,000 (Kurukshetra, 1978).

C. Women and Development

1. Role of Women in National Development

The Indian woman is the living goddess functioning in the household. (Ranganathananda, 1966). Women can handle

the sweeping changes in a progressive and positive way and establish the solidarity of the family (Dey, 1970). Gandhi (1975) has emphasised the vital role of women in shaping the destiny of the nation. Changes cannot be brought about without the cooperation of women. According to her, the mother, the sister, the daughter, the wife each has a specific role to play. Each one is an individual and citizen of India and of the world. In every branch of national activity women have made their contributions. They played an important part in the social life and in the history of the country.

Women's most durable contribution to nation building begins in the home (Bhowik, 1976). From the home to school is the next step since education is a nation building activity and the child spends most of his life in the school.

Nehru remarked "The greatest revolution in a country is the one that affects the status and living conditions of its women". Gandhiji brought a dramatic change among women of India by making them participate in the struggle for India's freedom. Any programme for village women must take into account her various roles in life. The most significant role she plays is that of wife and mother. The village woman besides being the member of her own family is the member of the village community and as such she is influenced by the community to which she and her family

belong. In the agricultural community, the village woman is also a producer and wage earner. (Government of India, 1959).

According to Nim Khar (1958) the several functions that rural women fulfil include housekeeping, managing domestic budget, educating children, wife, mother, hostess of the home, toiler in the farm as co-partner, worker at a supplementary industry, which includes agricultural production, animal husbandry or cottage crafts, and maintaining the sanitation of the home and its surroundings. While the major share of duties in sharing of household chores and participation in family decision making is with the female members of the family, they have little power. Most of the household jobs that are time and labour consuming, often described as "drudgery of family work" are performed solely by women. Examples of such jobs are cooking food (84%), cleaning the house (68%), cleaning utensils (65%), washing clothes (53%), fetching water (50%), looking after children (43%) (Ministry of Education and Social Welfare, 1974).

Woman's primary function is the management of the household and to care for the family. Her second task is to be an active member of the society and make her contributions to different fields of national development (Acharya, 1975). While the dominant role of woman is centered in the

home, if opportunities are provided she can become a central figure in her community, influencing and serving the social, economic and cultural standards of the family group to which she belongs (Krishnamurti, 1971).

Millgardh (1976) remarks that woman is also a producer of wealth in the villages helping her man in the field and in various other ways. As co-partner of her husband, woman has a great role to play in various agricultural operations, such as sowing, weeding, transplanting, harvesting, threshing, preparation of compost, application of manure and storage of seeds, foodgrains (Bhatt, 1975; Gopal, 1975; Chakravarthy, 1975; Ahmed, 1975).

According to the International Labour Organisation report on working women in changing India 82.2 per cent of women workers are employed in agricultural production as family helpers in the farm. In joint families not only the wives but also the mothers share a large part in decision making. Only when the women in the family are convinced about the efficacy of new ideas in agriculture they would be implemented in a large scale. (Devadas, 1969). Much of the success of farming depends on how well the family makes decisions (Singh, 1969).

Farm business being a family enterprise both husband and wife participate in it equally. It is therefore expected that all decisions related to farm operations are also taken jointly (Malik, 1975). As long as women remain uneducated

and without any voice, in family or community decisions development will be handicapped. Development can be speeded up by improving women power by giving women the opportunity to develop themselves (Higgins, 1973). Devadas (1975) points out that women determine the goals and values of their families. Therefore farm women need education to give help and guidance in agricultural operations in the farm and home. For the full development of the nation's resources, for the improvement of the homes, and for moulding the character of children education of woman is of utmost importance (Shah, 1976).

Duraiswamy (1976) views that women help informally and intelligently in solving general problems and in the economic and social transformation of society. Since women have a vital role in building the nation, the CD programme has been used by the planners as an instrument for promoting the welfare of families. For the successful working of the CD programme the welfare of women and their participation are very essential (Kumar and Patel, 1968).

The role of rural woman is not confined to the home alone. Her responsibilities extend from the home to the field operations in agriculture. She influences the diet patterns of the family and hence the food production pattern of the community. Therefore in order to achieve the objective of increased food production programme, a strong Home

Science Extension programme is inevitable. Such a programme would include nutrition education, proper utilisation of available resources and population education in relation to better family living and Home Science extension is to meet the changing needs of this community (Chakravarthy, 1974).

2. Problems faced by Indian Women

The problems of village women are the same all over the world points out Devadas (1956). The low status of women in society, harmful social customs and barriers, wrong attitudes about women, aggravate these problems. Women are accustomed to age old traditional practices with a low level of literacy. Early marriage, lack of economic opportunities, widowhood, drudgery in kitchen, facing and living in social degradation are certain problems according to Debleena (1978). Even though all opportunities are thrown open to women, the forces of conservatism in the Hindu society are so strong that women continue to occupy a low status. Illiteracy and ignorance continue to make them economically dependent on males (Varadappan, 1974).

The national average literacy happens to be 36 per cent in 1981 from 29 per cent in 1971. Outof the total female population which forms 318 millions 79 millions happen to be literates. Thus female literacy in 1981 forming 25 per cent lags behind male literacy which is 47 per cent (Competition Success Review, 1981; UNICEF, 1981).

There were 31 million women wokers in India in 1971 28 millions in rural areas and only 3 millions in urban areas. In rural areas, the great majority of women workers, namely, 87 per cent were engaged in agriculture and less than 2 per cent in manufacturing industries (Jain, 1975).

The agricultural operations, transplanting of seedlings, winnowing, storage of grains, are entirely women's jobs. But women's contribution of labour is not computed as an input in agriculture, though they share the work equally with men (CIRT, 1975). Female labour is cheaper than men's labour. They happen to be the recipients of low wages even though the law does not permit discrimination in wages. Despite legal and constitutional equality, women suffer most from social inequalities. The social evils which are rampant in villages, are the main hindrance in enabling rural women to play an effective role in the process of development. Their education and personal growth are ignored, preventing them from participating in activities that can augment the family income (Verma, 1978). The efforts made by the Government have by no means succeeded in controlling the degree of exploitation of weaker sections. Nor have they solved the problems of low productivity, poverty, unemployment and under employment. The Committee on Unemployment found women to be a greater victim of both unemployment and underemployment. The number of unemployed women in the rural areas was estimated to be 4.5 million

as against 3.2 million males in 1971. Women constitute 60% of the rural and 56% of the total unemployed in the country (ICSSR, 1975). The basic problems that affect women's roles and opportunities for employment in this sector, spring from their helpless dependence, caused by lack of opportunities, limited skills, illiteracy, restricted mobility and lack of autonomous status. The level of female unemployment is higher than that of males. The employment exchange statistics show that between 1964 and 1968, the number of women job seekers increased by 81%, while that of men increased only by 14%.

Economic necessity motivates women to seek employment opportunities for wages and livelihood, as a means of supplementing the family income. The economic role played by women cannot be isolated from the total framework of development, since social changes lead to major changes in roles and responsibilities and also in growth and development. (Alamelu, 1978). A study conducted by the Madras Institute of Development Studies (MIDS), (1974) in the urban areas of Madras and Coimbatore and the rural areas of Ramanathapuram and Dharmapuri districts, on the primary role of women noted that the most frequent response was that the primary role of a woman was to earn and support the family. This finding is far removed from the traditional role ascribed to women that the mission in a woman's life was being a daughter, wife and mother. (Rema, 1974).

3. Home Science in Community Development

Swami Vivekananda summed up the solutions to the national problems in India in two items: uplift of women and the masses. Emancipation of women and uplift of masses formed the two most important items in Swami Vivekananda's programme of national regeneration. (Avinashilingam, 1971). In order to awaken the people it is the woman who has to be awakened. Once she is on the move the household moves, the village moves and the country moves (Nehru, 1961). In this great effort, women have a vital role to play. In a community which is dominated by age long habits and traditions no change can be brought about without the efforts of women in the homes.

Agricultural improvement alone will not suffice because any change in the attitudes of people has to start with the Home and must carry the women of the home along with it. The home is the most important factor in determining the trends in the patterns of living of rural families (Devadas, 1960). It sets the standard for society and the nation. According to the standards set a nation progresses or stands still (Sounderaraj, 1966). The home and the family are the centres for the development of values which bind individuals to result in integrated personalities. Family is the training ground for its members, through participation in the wider life of society for the development of values. Development takes place in the home and

spiritual values start at home. The family is universally recognised as an indispensable nursery of human morals and manners (Swami Ranganathananda, 1966). The crucial need of the time is to impart the higher values of beauty, truth, honesty, devotion and cooperation to families, towards national integration. Home science knowledge can contribute towards national integration (Sinha, 1966).

Home Science is defined as education for homemaking with abundant living and happiness as its goals. It includes the study of many sciences and art subjects and on the strong foundation of these basic subjects the structure of Home Science with its areas of Foods and Nutrition, Clothing, Housing, Health, Household Management, Child Development, Home beautification, Community services and human relationship is built (Devadas, 1957).

Soon after starting the Community Development Programme, it was realised that the neglect of women was affecting the progress of the entire programme. A development programme specifically for women and children to meet their special problems and interests was felt as needed. Women extension workers were appointed. (Bradfield, 1966). The full time extension workers, responsible for implementation of the Home Science extension programme in the Block, included Mukhya Sevikas and Gramsevikas (Prema and Menon 1972-73).

The Home Science extension programmes were launched in 1954, with the cooperation of the U.S.Team and Ford Foundation. To start with, 27 Home Science wings were set up at the Extension Training Centres in the different states to train Gramsevikas (HSAI, 1962; Devadas, 1956).

Two Gramsevikas per Block were provided for the 5000 blocks and this required the training of approximately 10,000 field level workers. The number of Home Science wings increased to 46 later on. By the end of the sixties nearly 8000 workers had been trained in these centres (Chakravarthy, 1977). The number of Gramsevikas and Mukhyasevikas as in position in different states were 6651 and 1912 respectively (Directorate of Extension, Government of India, 1980) as shown in Appendix I.

The Gramsevika is given training for one year in Extension principles and techniques, Home Science subjects, Arts and Crafts, Agriculture and Animal husbandry, Panchayats and Cooperation and Community activities connected with women and children's welfare. She is provided also with field experiences. The Gramsevika works as a multipurpose worker. She is an extension worker, community organizer, a social welfare worker, a teacher and an executive. She is assisted in her job by gramlaxmis and gramsakis (Ministry of CD and C, 1960). The Gramsevikas according to Chandrasekharan (1971) form the backbone of the CD Programme. The main functions of the Gramsevikas according to Desai

and Mehta (1967) are to contact the women in villages, explain to them the developmental programmes, organise Mahilir Manrams, and Balwadis, develop cottage industries, arrange for study trips and conduct competitions. The job was not simple for the Gramsevikas. They were faced with numerous problems and obstacles (Nainee, 1966).

To supervise the work of Gramsevikas the Mukhyasevikas had to be trained (Asuri, 1968). The Mukhyasevikas' job included planning and organising development programmes for women, girls and children in the Block with the cooperation of officials and non officials, providing practical guidance and assistance to Gramsevikas in solving their field problems, helping them in executing and evaluating extension programmes and promoting skills and knowledge among women by extension methods in the field of Home science, Health and Sanitation, economic activities, education, recreation and cultural activities and in the formation of women's and children's organisations. Also she promotes leadership, acts as a liaison between the three basic institutions of the village, draws up budget and submits progress reports. The Mukhyasevika is trained in Rural sociology, Social education, Community development and related institutions, Home science aspects, Arts and crafts, Women and children's programmes and Administration and coordination. Block placement and camps add to their field experiences (Ministry of CD & C, 1961).

The welfare extension projects launched by the CSWB for women and child welfare were merged with the CD Blocks for working on a coordinated basis, and for supervision of work and functionaries, project implementing committees were set up with block officials and voluntary leaders. In Indian villages to-day there are women village level workers as Gramsevikas, School teachers and Balsevikas who are concerned with Integrated Rural Development (Chowdhry, 1975). The participation of village women can be achieved only through developing leadership by drawing them into activities in which they are interested (Kripalani, 1964).

The primary objective of rural development programme is to organise Mahila Mandals and to conduct programmes for women. Mahila Mandals are the organisations through which rural women have opportunities to discuss their problems and seek solutions to them. (Devadas, 1961). These are associated with a large number of programmes for women and children working towards improving the economic conditions in rural areas. (Varadappan, 1976). The programmes included nutrition education, mother and child care, health, home improvement, Adult literacy, recreation and cultural activities and family planning.

In addition to educating them to improve their own living conditions and environment, activities for involving them in the Mahila Mandal programmes that promise to increase

their income must be advocated. (Zaheer, 1975). Thousands of Mahila Mandals have been established by the Departments of Community Development, Central Social Welfare Board and Bharatiya Grameen Mahila Sangh. The functioneries required for rural development programmes are trained in different centres under the Directorate of Extension, under Ministry of Agriculture and Irrigation and also by some non governmental organisations. In service training facilities and refresher courses are provided to Gramsevikas and Mukhyasevikas and their instructresses (Ministry of Education & Social Welfare, 1974). Farmers Training and education programmes include training of farm women in agriculture, functional literacy and mass communications. At present more than one lakh have been trained under this scheme (Chakravarthi, 1977).

4. Women and Integrated Rural Development

India has been the mother of the village community of self government and democracy. It is essential to improve the rural areas through the improvement of rural women. Every woman is a creator in the ideal of womanhood. She sets the tone for happiness in home life. (Subbulakshmi, 1965). The welfare of women in the rural communities needs special attention (Deulkar, 1965).

Women constitute one half of the country's human resources. Emancipation of women, is an essential prerequisite

to generate economic development and social progress. (Devadas, 1975). The International Women's Year (1975) focussed global attention on the need for giving a new and fair deal to women as potential forces for economic development. Equal opportunities for women for participation in all areas of human activity and expressions make them powerful generators of social change. The programmes and events of the International Women's Year did stimulate some women to come out of their seclusion and indifference and gave them greater scope for social action (Gandhi, 1977).

As the late Philosopher President Radhakrishnan exhorted, the Constitution of India makes no distinction between men and women in the enjoyment and exercise of all rights. The emancipation of Indian women, cannot be considered to be complete unless and until they enjoy political rights, social equality, economic independence and biological emancipation (Chandrasekhar, 1968).

Although the Constitution of India guarantees equality of opportunity between men and women, the practice is far from theory. The prevailing socio economic cultural scene reflects women's educational backwardness, poverty, deprivations, ill health and lack of opportunities for economic, political and social activities. The inequalities perpetuated by tradition, culture, and society have lowered the status of women and block their progress (Devadas, 1976).

Much needs to be done to change the traditional image of women. While laws have been enacted to wipe out discriminations against women, the real change can be achieved only through education. Research at the instance of the Department of Social Welfare has pointed out that women need to be equipped fully to participate in socially productive work and achieve their full integration with the democratic and developmental efforts. The conditions of work and life for millions of women, in the country who did not have economic or educational privileges must be assessed to enable them to discover the power which lies within themselves and develop their talents for their own and the nation's benefit. A national movement and expansion of education must open doors which had been closed to a majority of women for centuries (Gandhi, 1977). If we educate a man, we educate an individual, if we educate a woman, we educate a family. To make our nation prosperous, it is essential that men and women shoulder equal responsibilities and lead the country to the goal of prosperity (Shastri, 1974). If women are left illiterate and backward, society cannot and will not progress. Women contribute to the prosperity of the country. The nation has tacked many problems of unprecedented magnitude in the past and present with courage and fortitude. When women work together, in harmony they can march ahead to achieve many goals (Raghuramaiah, 1974).

In a scheme of development with social justice, women in general, and rural women in particular, are important

partners in the march to progress. They must be given opportunities for education and training so that they can play adequately their role as partners in development plan (Plume, 1974).

Gandhiji said, "Men and women are of equal rank, but they are not identical. They are supplementary to one another. In framing any scheme for women's education, this cardinal truth must be kept in mind (Avinashilingam and Swaminathan, 1958). Swami Vivekananda wanted women's education to be developed and spread with religion as its centre. All other training should be secondary to religion. In regard to the content of education, Swamiji commented, "History and Puranas, housekeeping and the arts, the duties of home life and the principles that make for the development of character have to be taught. Other matters such as sewing, culinary art, rules of domestic work and upbringing of children will also be taught". Thus as early as last century Swami Vivekananda had emphasised the need for Home Science in women's education with inculcation of spiritural values as the foundation. (Avinashilingam, 1971).

Devadas (1975) stresses that women need to be helped to play their distinctive role in national development through appropriate education. Education should prepare women not only to be good wives, mothers and members of the family but also for the service of the country and humanity at large, and to be economically independent. According to

Devadas, educated women play a strategic role in the development of the future citizens of the country. The measures designed to promote women's education cannot be isolated from the overall development strategy. Conversely, development programmes which do not involve women will fail to realise their full potential. Therefore women's education as well as men's should include information on their productive roles in the family and the community with greater relevance to rural life through subjects such as farming, nutrition, food processing, home making, skills in child care, institution organisation, civics and citizenship (Devadas, 1977).

Rural women play a vital role in food production, food processing, home crafts, and several other facets of economic activity besides household work. There is scope for their improving their family income through developing better skills and using better equipment to perform the traditional tasks more efficiently. When Home science education is extended to these rural women success in Integrated Rural Development will result (Devadas, 1976).

Avinashilingam (1977) points out that Home scientists have a great role to play in shaping the future of the country. According to him, mere economic development is not purposeful as it does not give happiness to people. Home Science must have a good cultural, spiritual background. Economic improvement with the cultural background is the key to

human happiness and this is true of rural development also. Education therefore has to play a positive role in national development and social change. Education for rural girls should be patterned to suit the vocational needs of the respective areas. (Nischol, 1975). Such education determines the place given to women in a society and also their future status (Jacqueline, 1970).

The need to relate education and particularly vocational training to actual employment opportunities has been repeatedly emphasised by various expert bodies such as the International Labour Conference in 1965, the U.N. Commission on Status of Women, (1975) and in India the National Committee on Women's Education (1974). The Education Commission (1964-66) pointed out the need for a programme of vocational education so that education would be related to productivity. Vocational education should conform to the dire need for self employment opportunities. When vocational education aims at the development of certain basic skills, attitudes and aptitudes for occupations, the individual is prepared for self employment and this becomes education for life. (Pankajam, 1977; Brahma, 1975).

The universal application of Home Science and the need for specialisation at different facets have definite scope in vocational education. Home Science is most apt for vocationalisation as it is a unique combination of many sciences and application of art principles in daily living.

Home science in vocational education will have a very significant influences on national development. (Devadas, 1969; Kamalanathan, 1977).

Home Science education provides vocational courses which include nutrition and dietetics, food preparation and preservation, bakery and confectionery, catering, child care, and nutrition, designing, dyeing and printing, dress designing and making, textiles and designs, interior decoration and handicrafts. (Rajalakshmi and Devadas, 1979; Tamil Nadu Govt.Gazette, 1978). Home science education therefore has a vital contribution to human development,better living and national well being. Its approach is problem oriented, human based, and needs fulfilling. Hence the need for Home science is increasingly recognised by educationalists, planners and policy makers at all levels of education, research and extension in the country today. Thus Home Science can make a worthy contribution to Integrated Rural Development. (Devadas, 1980).

D. Unemployment and Cottage and Village Industries

The three main objectives of the VI Plan are elimination of unemployment, improving the economic conditions of the people living below the poverty line and provision of public goods. These are interrelated and involve the removal of inequality and poverty among the masses (Joseph, 1978). Joshi (1978) points out that out of 72 million farm

households 70 per cent are small and marginal farmers and to improve their economic position they need subsidiary occupations.

A detailed study of the rural life brings to light the fact that the efforts to build a strong base should be directed to

1. improve the standards of living of the villagers
2. improve agriculture and related activities and
3. promote cottage and village industries, arts and crafts and other occupations to provide an additional sources of income and employment opportunities to the underemployed and unemployed rural population

(Patel, 1977).

1. Need for Rural Industries

In view of their capacity to generate employment opportunities in the rural sector at a low capital cost, the village industries have been accorded an important place in economic development. (Verma and Vastava, 1973). The organisation of village industries and creating millions of jobs will alone bring prosperity and happiness to the rural masses (Singh, 1976). To a large extent, these help in creating substantial employment opportunities on a permanent basis (Dhar, 1975; Guha 1973). These can be mostly on self employment basis.

Industries will have to be organised on decentralised basis in the rural areas, if the available labour potential is to be fully and properly utilised. Since the capital is scarce while labour is in plenty the only way to bring prosperity to the villages is to revive cottage and village industries (Gurusamy, 1977). Fernandez (1977) urges strengthening of the decentralised sector to end the abject poverty and unemployment in the rural areas. According to him the need of the hour is the diversification of the rural economy and providing full time and part time employment to crores of rural people. Great emphasis must be laid on securing the benefits of modern science and technology for developing the self employment of decentralised sector. In this context the Khadi & Village Industries must play a vital role (Khadi Gramodyog, 1977). The salient features of the Khadi & Village Industries (KVI) is that it is labour intensive and capital saving, easy to set up and quick to yield production. Furthermore it provides subsidiary occupations and additional employment, utilising rural manpower and thus increases the income of the poor. Over 2.3 million units employ more than 12 millions in this unorganised sector (Subramanyam, 1978). Production of Khadi, processing of cereals and pulses, pottery, village leather, gobar gas, non-edible oil seeds, cashew kernels, handmade paper, bee keeping, ghani oil, neera, palmgur, lime, match, fruit processing, soap, carpentry and blacksmity and fibre are some of the industries (Krishnamurthy KVIC, 1979).

2. Self Employment for Women

According to the 1971 census, women constitute 48 per cent of the population but only 13 per cent are participating in economic activities (Oza, 1975). The problems of unemployment and poverty can never be solved unless and until women are enabled to participate fully in economic and social development of the country views Rajula Devi (1978). Programmes for women entrepreneurs must motivate them to take up self employment schemes. Special efforts should be made to educate and train rural women in suitable avocations such as kitchen gardening, dairy, poultry, crafts, spinning, tailoring, preparation and marketing of consumer goods and several other income generating ventures (Muthuswami, 1977). While Jagjivan Ram (1976) advocates simple technology to accelerate the pace of economic development Gausha (1977) stresses the need for extending appropriate technical advice to rural women since much of the post harvest operations are in their hands.

a. Women in the Khadi and Village Industries Programme

In the decentralised sector of KVI owing to the characteristics of light operation, feasibility of being plied during hours which are convenient to women after attending to domestic chores in their homes and the artistic nature of some of the products demanding feminine skills, there is greater participation of women in the production process. In Khadi, spinning is mostly done by women and in

weaving they act as helpers. The monthly wage of a spinner on an average ranges between Rs.80 - 150 depending on the technology of spinning.

Similarly in the processing of cereals and pulses and cottage match the major participants are women. In palmgur industry the female member assists the tapper in neera collection, manufacture of palmgur, and in the processing of palmyrah fiber. In non-edible oils and soap industry, the seed collection activity provides employment mainly to women. Processing of paddy and papad making afford work opportunities mainly to women. In the village leather industry women artisans play an important role in the embroidery work, particularly leather garments. The vegetable fiber industry also provides vast opportunities for women's participation in the production of artistic elegant fibre articles. In village pottery, in the conversion of red clay or glazed products and the artistic work in them women find employment. Similarly in the various processes of lime manufacturing industry, the forest based industries, women's participation is significant. (KVIC, 1979).

3. Welfare organizations for women

Women's welfare organisations must devote attention towards the amelioration of social and economic conditions of rural women so as to enable them to take part in nation building tasks (Giri, 1974). Voluntary agencies can provide

dedicated service to women and children (Venkitasubramanyam, 1977).

a. Socio economic programmes of the Central Social Welfare Board

The Central Social Welfare Board (CSWB) set up in 1953, has made commendable contributions in the field of women's welfare. During its 25 years of service, it has been meeting the chronic emerging needs of welfare of women, and their problems on a planned and sustained basis as an integral part of national development. The organisation comprises membership of non-official women, social workers, a few ex-officio representatives of government departments. The rise in grants from 620 in 1953-54 to No.4000 in 1976-77 is a great achievement (Social Welfare, 1978). Some of the leading programmes of the Board which have achieved remarkable results include Welfare Extension projects, Socio Economic Programmes, Condensed Courses of Education for Adult Women, Hostels for Working Women (CSWB, 1978).

The Socio Economic Programme of the CSWB provides the economic base for rehabilitating the needy women of low income groups, destitutes, widows and the deserted by providing training in selected vocations, and opportunities for gainful employment for supplementing family income. One of the main categories under this programme is production units of small industries that include toys, educational equipment, stationery items, chalks and crayons, fruit

preservation and canning, bakery, leather items, readymades. It is a technical programme and marketing of products is a crucial problem. Also there are units as ancillary to large industries, handloom training cum production units handicrafts production units and Industrial Cooperative societies (Social Welfare, 1978). As on March 31, 1978 there are 1538 production units with an employment potential of 19871 women (CSWB, 53-78). To suit the VI plan (1980-85) a revision of the scope, contents and budget of the programme took place and the proposed outlay happens to be 152 crores (CSWB, 1980).

b. Women and Bharatiya Grameen Mahila Sangh (BGMS)

The BGMS the National association of rural women in India was established in 1955. One of the main objectives of this organisation is to concentrate work among rural women to improve their socio-economic needs towards attainment of improved standards of living (Kurukshetra, 1979; B.G.M.S. constitution and by-laws). Among the economic programmes, bakery, tailoring and readymade garments and spinning with ambar charkas are the main items for which vocational courses combined with education are provided for women (Gandhi Peace Foundation, 1977).

c. Other women's welfare organisations

The credit for taking initiative for bringing women on the rural social science in the early fifties goes to

Kasturba Gandhi National Memorial Trust which introduced a number of programmes for women and children (Chaudhry, 1975). The main Voluntary agencies working in the field of women's welfare today are the All India Women's Conference, Kasthurba Gandhi Memorial Trust, Home Science Association of India, the Young Women's Christian's Association, National Council for Women, Indian Federation of Women's Association and the Women's Voluntary Service. The setting up of Self Employed Women's Association in 1975 in Ahmedabad is an effort to organise the self-employed women workers in different types of vocations (Devadas, 1981).

4. Garment making and Rural Development

Village women need to play their role as producers and wage earners effectively and thereby secure a significant socio economic status: Vocational and professional training programmes have come in the way of women's employment. Training in skilled programmes help rural girls to enrich their standard of living(Nayak, 1972). With increasing interests of rural women, they must be given training in sewing, knitting, embroidery care of clothing to enable them to take up subsidiary occupations (Ministry of CD & C, 1962). The importance of providing skills, to rural women as a means of providing them with continuous employment must be realised and projects taken up with locally available resources (Ramaiah, 1976). Varadappan (1975) stresses the need for enabling women to learn a few useful crafts that

would help her to be gainfully employed and utilise the products in a way to contribute towards an adequate incomme. Of late many of the welfare and voluntery agencies and women's polytechnics have been emphasizing tailoring and readymade garments as one of the most suitable and important avenues for self employment for women and sewing machines are made available for women in the rehabilitation programmes (Ministry of Education & Social Welfare, 1974). In the socio economic programmes of the CSWB, readymade garments forms one of important avenues for self employment of needy women (Social Welfare, 1978).

The garment industry when compared to the textile piece goods industry is an infant, providing employment for women. The number of women employed in the industry in India forms 22 per cent of the work force. In the newer and bigger units they are employed in greater numbers. In foreign countries a much higher proportion of women are employed e.g., U.K. 84.6%, Japan 73%, Hongkong 70%. The general shortage of labour, the availability of women at a lower wage than men, their traditional aptitude for tailoring and the helpful degree of mechanisation explain the higher proportion of women in the work force in these countries. Only the second and third of these factors are operative in India (Narayanaswamy and Sri Ram, 1972).

The Women's Agricultural Cooperative of Bangladesh have women's groups engaged in a wide range of activities, determined by women themselves. Among other items are growing vegetables and fruits, making jute handicrafts, and sewing. These are largely home based activities for household consumption for sale in the local community (Dixon, 1979). Among those crafts recommended for development especially in rural areas on the basis of employment, marketability and export potential garment manufacturing occupies an important place (UNICEF, 1977).

The Delhi Study conducted by Ranade (1970) shows that the number of matriculates (47 out of 91) was highest among women in the age group 18-20 years forming 52 per cent. Of these half had undergone some type of vocational training or other. Though teaching was found to be the most popular type of vocational training for 39.5 per cent, other important fields in which vocational training was undertaken by women happened to be tailoring and embroidery forming 24 per cent, technical trades as telephone operators 12.4 per cent, typing and shorthand 6.8per cent, medical jobs 5.6 per cent, social work 4.3 per cent. Tailoring is thus among vocations suited for women. A housewife can be a tailor and supplement the family income substantially (Chattopadyay, 1969).

5. Studies conducted

Kamala et al., (1970) conducted a study on educating rural young women in garment construction. Their findings

reveal that the satisfaction derived by the members of the sewing class included they could decorate their homes with fine articles, they could learn the art of sewing, spend time usefully and save money and renovate garments, and increase their social contacts.

Kalaimani (1977) conducted an experiment on rural girls by imparting skills in garment making. They found that garment making proved to be a very useful and interesting leisure time occupation, which fulfilled their family requirements of clothing. Garment making has thus come out as one of the most beneficial subsidiary occupations that village girls could take up and earn money, remaining at home.

Jacob et al., (1975) initiated some activities for rural women's clubs in Coimbatore district. They found that the leisure time of members of women's clubs could be utilised well on constructive activities such as tailoring, which had the maximum participation of 65 per cent of women. In the village Kovaipudur, dramatic changes were brought about by this activity and the efforts undertaken resulted in increasing the earning capacity of 4 homemakers by Rs.6-10 on an average per day.

Nanjammal and Seethalakshmi (1977) introduced subsidiary occupations in selected villages. This included motivating a bachelor trained in tailoring at Kottaipalayam to organise a self employment scheme, in dress making.

Financial aid was obtained through a bank which formed the security and the candidate earned 100 rupees per month and repaid the loan by instalments of Rs.50 per month and this proved to be a means of improving the family income.

E. The Garment Industry in India - Problems and Prospects

1. Indian Garment Industry

The Indian garment industry is labour intensive with great scope for employment. It falls into two major categories one catering largely to domestic market, the other primarily oriented towards export production (Indian Institute of Foreign Trade (IIFT, 1977).

The garment industry in India is at infant stage since it has not yet attained the status of an industry with an organised set up. Urged by the growing demands, the garment manufacturing and exporting units are endeavouring to organise themselves for the proper development of the industry (Hademi, 1977). The industry has an investment of Rs.57 crores and the estimated total employment is 4.7 lakhs with a wage rate bill of 87-96 crores per annum (Indian Express, 1977).

a. Location

Readymade garments are still a product of the decentralised sector. Most of them are small and medium units situated at metropolitan areas in small spaces concentrated in groups employing skilled tailors and unskilled helpers

numbering twenty on an average (Ministry of Commerce, ——).

Though spread throughout the country, the major manufacturing and exporting centres are located at Delhi, Bombay, Madras, Bangalore and Calcutta. These centres account for almost 66 per cent of production and over 90 per cent of exports. Garments manufactured in other centres are intended mostly for the domestic market. Except for some variations, the structure, production, export pattern are largely similar, in all these major centres. Some details regarding the garment industry of India are presented in Appendix II.

b. Scope for employment

Garment industry is one of the very few that could generate maximum employment with minimum capital investment on machinery ranging between Rs.25,000/- and Rs.50,000/- (IIFT, 1978).

The industry mainly relies on indigenous raw material and skills. An interesting feature of the centres of Karnataka, Tamilnadu, Kerala and Delhi is the predominance of women workers in garment production forming 50-60 per cent of the total work force.

Small scale industry of the above nature, using appropriate technology, involving minimum overhead cost, low capital investment, can create the economic climate necessary for

increasing employment opportunities (Swamy, 1977). According to Amersey, President of the Clothing Manufacturers Association of India (CMAI, 1977), Rs.10,000 invested as capital, in a garment making unit, can produce goods of Free on Board (FOB) value of Rs.50,000 per annum and provide employment upto ten persons. No other industry can show such export turnover and job opportunity. Even as small an investment as Rs.1000/- can provide employment directly or indirectly for five members (Amersey, 1977).

c. Pattern of employment

The normal pattern of employment is to have one operative per machine, the major proportion of machinery being sewing machines. The workforce thus consists of mainly tailors. In the majority of units the batch system of operation is adopted. There is a good amount of part time employment mainly in the household sector.

d. Investment in machinery

According to Narayanaswami and Sri Ram (1972) around 75 per cent of the garment units (740 out of 1000) are in the cottage sector each possessing four-five pedal operated machines. The majority of the units have installed plain stitch sewing machines and a limited number of complementary machines. The bigger units are equipped with different types of machinery. The range of ancillary equipment used vary widely covering cutting, collar turning and fusing,

buttonholing and stitching, cuff making. Other machines in use are for body or collar pressing, spot welding, label cutting and folding, pocket making, bar tacking, overlocking, blind stitching, zigzag stitching, profile stitching. Few units have cloth laying machines and perma press plants. (Cotton Textiles Export Promotion Council, 1974; Narayanaswamy and Sri Ram, 1972). It is the cutting room that initiates the production process and guides operations (Vias, 1977).

e. Capacity utilisation

Demand for readymade garments in domestic and international markets is seasonal. In the domestic market, sales pick up during festival seasons, while foreign demands are limited to summerwear. The average utilisation of capacity ranges between 60-65 per cent, estimated roughly, around 750 million pieces in terms of quantity and Rs.10/- 200 million in terms of value.

Cotton garments have a predominant share in the production composition as they account for over 90 per cent on an average in the country's production in recent years. Consumption of fabrics in 1977 was estimated at 836 million metres, of which cotton formed 772 million metres (IIFT, 1978).

f. Domestic market

Production for the domestic market had the major share of total output accounting for 85 per cent between 1973 and 1975 and 76 per cent in 1976-1977. The total production in 1977 amounted to 491 pieces valued at 6614 million rupees, of which, 365 pieces valued at 3764 million rupees, were for the domestic market and 126 pieces valued at 2850 million rupees were for exports.

g. Exports

Exports of readymade garments from India have been showing a rising trend. In 1976-77, clothing as a commodity group was the second largest foreign exchange earner. From a meagre 0.74 per cent in 1967-68, the share of clothing in the country's total exports increased to an impressive level of 6.54 per cent in 1976-77. In absolute terms, exports of clothing escalated from Rs.88.2 million in 1967-68 to Rs.32467 million - a 36 fold increase in the span of a decade. An increase of 20-25 per cent was expected over previous years export earnings which was 637 crores (Goenka, 1980). This growth is the highest recorded by any country so far in this item.

Although the performance appears highly commendable, India's share in the total International business of garments is still less than 2 per cent (Shah, 1978). Rajendran (——)

concludes with the increase in demand for clothing in the world market, the export trend of cotton apparel from India both from mill and handloom fabrics promise very good potential, the share being well over 90 per cent in total exports. A few cotton outer garments dominate the export list. During 1976, five items, namely, cotton outer garments for men, cotton blouses, cotton dresses for girls, dress shirts and T shirts accounted for a little over 82 per cent of total garment exports. Another signficant feature is the higher share of cotton handloom fabric garments in the export mix. Till 1976, Handloom garments had the major share, but in 1977 the position had changed - the share of mill made fabric garments was more than that of handloom garments. Almost 85 per cent of the exports of ready made garments from India are directed to just eight countries of the world. The EEC and America receive over 80 per cent of the exports.

h. Wage structure

The system of payment of wages varies as some employ tailors on piece rate basis or on daily wages. Cutters, designers, checkers and packers are employed on monthly wage basis. Tamilnadu is the third largest garment exporting centre in the country and exports are mainly confined to cotton garments. Twenty per cent of the production of garments in the State are exported (IIFT, 1978).

2. Problems and prospects of the garment industry

The prohibitive cost of synthetics and blends due to high raw material cost, heavy excise duty and conversion costs forbid the garment industry to utilise them for exports. Hence handloom cotton garments form the major share of exports. In this regard the quota restrictions, use of restricted range of handloom fabrics, limited product range, quality variations, between mill made, powerloom fabrics, price and economic considerations, are the problems faced. The industry would be encouraged if equal importance is given to mill made, powerloom and handloom fabrics.

In textile production, fabrics suited to garment industry must be earmarked by the Textile Committee. A library of fabrics need to be established since this can serve as the repository of information on fabrics for ready reference. To suit international demand, fabrics of new types need to be produced on a continuous basis. There is vast scope for the marketing of non quota items such as the industrial garments, institutional clothing, army softwear and sports wear. Also there is a good possibility of expanding trade in natural silk garments with foreign countries. (Handloom Export, 1979).

Garment units view that Government policies must be adopted in consultation with the units themselves. Relaxation of inspection schemes, revision of quality control and quota administration procedures are essential. The need

for export diversification both product and market is crucial (IIFT, 1978).

No industry can thrive if it has to rely mainly on exports for its survival. In his annual report of CMAI Shah (1977) stressed the need for the building up of a strong domestic base for garment industry to meet the challenging task of providing cheaper clothing for the masses. Hence the CMAI is actively pursuing the possibility of manufacturing school uniforms and other cheap clothing for the Indian masses so that the accent of the industry is not wholly towards exports but also towards serving the demands and preferences of the Indian consumers (Clothing Journal, 1978; 1981).

According to Narayanaswamy and Sriram (1972) only two per cent of the clothing requirements of the Indian population are met by the garment industry. Many units represent great unexploited and untouched potential for mass produced garments for the domestic market. A growing internal market is an asset to any industry for building up exports and as such, the Indian readymade garment industry needs to tap a vast internal market, particularly in the neglected rural sector. With growing rural prosperity the rural population can go in for ready to wear provided manufacturers can embark on popularising their products. (Bank of Baroda Weekly Review, 1970).

Today, the garment industry is mostly oriented towards the production of men's wear (89 per cent). Women's and children's wear account for only 5 and 4.5 per cent respectively. Production of accessories and made up articles form a considerable proportion of output in terms of pieces produced, but only a small percentage in terms of value (1.5 per cent). Production of women's wear is said to be constrained since there is little scope for standardisation in the tight fitting women's blouses (the cholis). Difficulties in standardising women's wear have stood in the way of progressing increase in its production not only in India, but in Japan, Sri Lanka and other countries also. (Narayanaswami and Sri Ram, 1972).

Ramadorai as quoted by Madhu (1978) opines that the garment industry needs to keep pace with the fastly changing fashion trends. India's ethnic designs that reflect its distinctive heritage have a perennial appeal abroad. He feels garment industry should come up with new styles of ethnic garments: and Vijay Mehta of Garment Exporters' Association emphasises exporting garments requires strict quality control, continuous monitoring of foreign fashion trends, research and development in fabric and garment design, attractive packaging and a firm price policy. If these are attended to, India can clothe the world.

Ramakrishna (1977) stresses the need for quality consciousness at all stages of garment production in such

operations as fabric selection, garment making; finishing and packing. Narayanaswamy and Sriram (1972) point out, that one aspect of quality control that receives most careful attention is whether the whole of the finished garment is according to prescribed measurements. For the domestic market, specifications are empirical, being based on trial and error methods learnt by reference to reports from distributors. Standards in body measurements have not been prescribed for apparels for the use of the garment manufacturers. This field needs further investigation.

F. Standardising Body measurements, size formulation and Pattern making

1. Studies in Anthropometry

The science of taking body measurements is known as anthropometry. Topp et al., (1970) and Buzina (1972) opine that body measurements if properly obtained and interpreted would serve as useful physical signs in the evaluation of nutritional status. According to Ramachandran et al., (1968) anthropometric data are used in national and international forums in designing uniforms, readymade clothes, footwear, classroom furniture, nursery play material and to estimate space required for work, besides helping in assessing the nutritional status of a community. Discussing nutritional anthropometry Trivedi et al., (1971) and Jelliffe (1973) exhort there is a considerable need for an agreed standardisation of the methods, techniques and procedures employed for suggested anthropometric standards of

reference, and for the presentation and interpretation of results so that some degree of uniformity and comparability can be attained among studies.

The two most commonly employed anthropometric measurements to evaluate growth and nutritional status are height and weight. Illingworth (1973) states that height is an overall measure of body size. Jelliffe (1966) and Antrobium (1971) are of the opinion that in any group of measurements body weight is the best index of nutrition and growth because it sums up all the measurements in size. Only a few studies are available in anthropometry particularly in children of different age groups in nutrition as related to growth status.

Smart (1962) studied the heights and weights of preschool children of the Chetan Balwadi in Baroda and Madhavan et al., (1967) studied the association of growth status and the prevalance of nutritional deficiency among 1809 preschool children in 26 villages around Hyderabad. Ghai and Sandhu (1968) and Datta et al., (1970 and 1970) reported the physical growth of preschool children in Delhi. In all these observations the female children were found to be shorter and lighter than their male counterparts.

Koshi et al., (1970) and Ghai et al., (1970) have reported the anthropometric measurements of children of Lucknow in Punjab and Gurgaon in Haryana respectively. The

children of Lucknow evinced better nutritional status than the children of Gurgaon. The difference in the anthropometric measurements of well privileged and underprivileged Indian school children was investigated by Datta et al., (1973) and they found the previleged children to be superior in their body measurements when compared to their underprivileged counterparts. Another study by Chaudhri (1975) in Calcutta on 3102 preschool children also recorded a similar trend in the growth of male and female children.

Rao et al., (1969, 1974 and 1976) in three different studies determined the body measurements of rural preschoolers, Children of urban slums and the well-to-do children of Hyderabad. They have also recorded better measurements for boys than the girls of the same age groups. Among the three groups the rural children had the lowest measurements and the well-to-do children had the highest measurements irrespective of their sex. Another study in Andhra Pradesh was reported by Injety et al., (1979), among the school children of Vishakapatnam. This study gave the values of 400 school going children of 5-6 years old belonging to middle income group.

While much research work has been done in anthropometry in connection with nutrition and growth status of eminent scientists little work has been done in India in connection with collection of anthropometric data for purposes of formulation of sizes for dresses.

2. The Need for Standardisation

A standard is defined as the criteria for comparison. Standards properly conceived will provide a base or pattern for consumers (Helen, 1951). Coles (1932) expects standardisation to provide the basis for measurement of qualities and performances of goods to provide their identification and to set up the best for a particular purpose.

According to Encyclopaedia Britanica (1963) a standard is that which has been selected as a model against which objects or actions may be compared. A standard provides a criterion for judgement. Standardisation is a process of developing and bringing about the utilisation of standards. Mansfield (1953) indicates that human figures are not standardised. The problem of sizing which confronts the pattern makers both commercial and ready to wear can scarcely be solved to the satisfaction of every one. Basic patterns for various sizes are based on measurements they believe will fit the greatest number of figures. The success of any sewing venture depends partly on the pattern, which in turn, is made out of standardised body measurements (Lynch and Sarah, 1950).

A report of the University of Wisconsin (1960) states that all patterns are designed according to standardised body measurements for bust, waist, hips and back waist length. According to Alexander (1977) commercial

standards are of three types. Body measurement standards refer to those taken over foundation clothing. Model form standards represent special length and girth modifications of body measurement standards for purposes of garment fit. Garment size standards give dimensions for specific items of clothing and are based on body measurement standards. Body measurement standards are the most important to consumers and home sewers as this forms the basis for commercial pattern sizing.

Dahanukar (1971) stressed the importance of and need for standardisation in the 13th Indian Standard Convention, in the field of readymade garments. The techniques involved in evolving rationalised size rolls by conducting anthropometric surveys of representative cross sections of population for arriving at Key Body-Measurements followed by fitting trials to determine the fit range was discussed (Textile Magazine, 1971). Thomson and Rea (1949) point out that if uniform scales and proportions are used by all manufacturers of clothing and pattern makers, both consumers and merchants would be inestimably benefitted.

The advantages of standardisation, according to Khuller (1971) are: it eliminates the confusion of different manufacturers in adopting their own methods for indicating sizes, provides information for improving garments, enables the consumer to purchase without alteration or changes and facilitates maintenance of stock of varying sizes.

3. Studies conducted abroad

The need for standard sizes arose when the factory system of readymade apparel began in the 19th century. Without standardisation of sizes factory production was found impossible. The scientific way of arriving at standard size was to work from actual measurements of a great number of people, but such measurements were not always available. During the civil war in U.S.A., a great many young men were measured for height and chest and these were compiled and tabulated for the manufacture of uniforms.

A study of the physical measurements of chest, waist and hips of 2,139 girls by the Pratt Institute supplied interesting information on the distribution of body measurements. There were several helpful insights into height and weight in relation to age of children. The results of these studies were helpful to the manufacturers of girls' apparel.

A comprehensive piece of work was undertaken in the direction of standard sizes, and measurements by the Associated Knit Underwear manufacturers of America in cooperation with the National Bureau of Standards. The method used in this study was to compile and tabulate all the measurements used by the various manufacturers, who were members of the Association. From the information so collected averages were calculated for each size. From these averages practical standard measurements were set up for each size

by each type, including a certain percentage of tolerence of variations to entitle a manufacturers' garments to be designed by a certain size (Nystrom, 1928). According to Coles (1932), standard methods of measurements were developed and adopted for 49 various types of men's, boys', children's and infants, knitwear. Similar standard for measurements of boy's blouses and shirts, have been adopted as commercial standards by the manufacturing industry in cooperation with National Bureau of Standards of U.S.Department of Commerce. Minimum Standard measurement and tolerences for men's shirts and pyjamas were adopted in 1929 itself.

Thomson and Rea (1949) state that in 1941, American standards body size for boy's garments, were published by the American Standard Association. The measurements used were based on a nationwide study on body measurements on 14708 American school children in a project, organised and directed by the Bureau of Home Economics and Human Nutrition. Thirty six measurements of boys of 4-17 years of age based on height and hip measures instead of chest were standardised (Wingate, 1970). These body size standards enabled Lonie (1966) to develop patterns for apparel items. Troelstrup (1957) and Nickel and Dorsey (1970) point out that studies made by Bureau of Home Economics on body measurements of children showed that many children of the same age had entirely different body proportions and dimensions.

In 1945, at the instance of the Mail Order Association of America, a recommended commercial standard on Body measurements for the sizing of apparel for infants, babies, toddlers and children was presented to interested producers, distributors and users for written acceptance. The standard became effective from 1948. The purpose of the standard was to provide standard classifications, size designations, and body measurements for the sizing of infants, babies, toddlers and children's ready to wear apparel for the guidance of those engaged in producing, or preparing specifications for ready to wear garments and patterns. Another purpose was to recommend methods of determining length of apparel items from appropriate body measurements (U.S. Department of Commerce, 1953). The recommended commercial standards on body measurements for sizing of apparel for girls and the standard commercial sizes for men's shirts was also published at the same time, by the Bureau of Standards (Thompson and Rea, 1949).

In June 1956, the Pattern Fashion Industry announced a Revised Standards of Body measurements of Patterns for boys and girls and men's and women's apparel (Erwin, 1957). For the standard body measurements, set up by the U.S. Bureau of Standards the major pattern houses willingly conformed. These standards were formulated by taking measurements of a large number of girls and women, and computing them in chart form. The girls and women's figures fell into several

categories and the findings were used by the clothing industry to satisfy almost every figure requirement. (U.S. Department of Commerce, 1953: Bane, 1958). According to the new standard the size was based upon a combination of measurements including bust, waist, hip and back waist length. (Tate and Glisson, 1961).

Prior to 1968, patterns were sized according to body measurements established by the Bureau of Standards. The measurements were such that the customer required a pattern one size larger than she wore in readymades in order to make the size correspond to the ready to wear clothing. (Bane, 1973). In 1968, the major pattern companies attempted on a revision of size standards for patterns. The size standards of the Federal Government, the popular priced ready to wear and mail order garment industries were studied. The object was to establish new standard body measurements for the pattern industry. Now the homemaker buys one size smaller by the revised size standard than she did before. (Wingate, 1976). These standards became effective in 1970 (U.S. Department of Commerce, 1971). But there was no change in the sizes of boys, girls and toddlers.

Robert et al., (1974) presented data on 21 body measurements along with age and sex by conducting a study on body dimensions and proportions of White and Negro children of 6-11 years. These findings would be useful to those concerned with the manufacture of clothing. In Great

Britain a clothing survey was conducted in 1944 to obtain needed information for development of clothing sizes. The Dutch conducted a survey in 1947 on measurements on 5000 women for the same purpose (Verma, 1971).

4. Studies in India

Suchdev (1971) points out the need for standardization in readymade garments. A number of standards had been formulated by overseas standard bodies, but they are not helpful since Indian body measurements vary considerably from those specified in overseas standards. For obtaining standard sizes and to control the quality in India, standardization has to earn its place in readymade garments. The Indian Standard Institute should take up the standardisation of sizes of garments and their labelling details.

Verma (1971) stresses the need for coordination between scientists, anthropologists, statisticians and clothing technologists in the formulation of standard measurements. According to him the needs of business with research programmes should go a long way to solve the problem of sizes. Measurements may be taken by trained anthropometricians. Special techniques may be applied by statisticians to produce results in a form that can be understood and used by clothing technologists.

A series of fitting trials must be conducted by tailoring experts, with a set of garment sizes according to

preliminary size roll. Only then standard sizes can be finalised and accepted. Sharma (1970) conducted a study in standardising body measurements of 300 young women and developed patterns for cholis for different sizes. Rajore (1971) collected anthropometric data on infants in Ludhiana and treated them in different ways to obtain the proper sizes of patterns which she recommended to manufactuers, housewives and tailors.

Patel (1963) conducted a study on body measurements of children of 4-17 years of age in Baroda. These were used for drafting patterns. Thirtyfour body measurements were taken on each child for standardizing sizes. Grouping the children according to height and weight was more appropriate than according to age.

Bray (1964) stresses that it is better to obtain a few accurate measurements rather than many inaccurate ones and that further pattern details can be worked out by average proportions. Since children grow all the time, ease in fit is essential and so children's garments should not be cut to fit tight. Care should be taken to see that an easy fit does not result in illshaped garments.

Considering the limited choice and heavy expenses involved in readymade and tailormade garments, Shingla (1968) stresses that it is essential to standardise the basic block and to make it available to the housewife, for economy

and better production at home. Shingla (1968) measured three year old children. After standardizing the sizes she adopted the basic block to various dresses with the help of paper patterns, as suited to small children at that age level.

Body measurements of adolescent young girls were standardised and patterns for choli were developed by Alexander and Krishnabai in 1972. Twelve body measurements of 300 early adolescents were standardised and five bust sizes were formulated. Choli patterns were developed for three sizes and these were found to fit more than 60 per cent of the samples in each size. Ritarai and Krishnabai (1974) standardised body measurements for sports dress. Fifteen body measurements of 500 adolescent young girls were studied and three sizes were formulated. They viewed standardisation as the basis both for the present and also for future development and that it should keep pace with progress. Pearson and Krishnabai (1974) standardised body measurements of five hundred preschoolers. Twenty six body measurements were categorised based on chest measurement using mode as the statistical tool and three sizes were developed by them.

Bhasin (1978) conducted a study on anthropometric measurements on 300 boys of 5-6 years in Chandigarh. She divided the sample into three categories as small, medium, large and standardised all the body measurements for each

group. The standardised body measurements of Bhasin (1978) were utilised by Suneja (1979) in standardising the basic bodice block, the sleeve block and jangia block for five year old boys at Chandigarh. Minor alterations were done in armpit and waist levels of the bodice block for obtaining an accurate fit.

More work needs to be done in India in regard to standardisation of body measurements. Any work undertaken in this connection is likely to benefit the ISI, garment manufacturers, tailors and housewives.

5. Body Measurements and how to take them

Properly fitted clothes begin with accurate body measurements (Pollard et al., 1964). Taking correct measurements not only helps to achieve good fitting but they save time in fitting and refitting the garments (Carson, 1955). The need for accurate measurements for both figure and pattern has been stressed by Strickland (1956) and Ushakala (1969) specially for beginners in garment construction. To make a becoming garment the structure of the body and its measurements need to be understood so that both the pattern and the fabric can be manipulated successfully opine Ryan and Phillips (1947). Success in dressmaking depends on good fitting and so it is worth taking time and effort to check measurements for their accuracy opines Fisher (1973) and they also form the basis for pattern selection and pattern alteration (Iowa Home Economics Association, 1963).

a. Equipment needed

The following equipment are required to take accurate body measurements:

Guterman (1972) recommends a tape measure with a hole that can be used for marking circles. A flexible tape made of material that will not stretch or tear is the wisest choice (Fisher, 1973). The measure should be reversible, have centimeter and inch markings and metal tips at both ends, which keep the ends of the tape from fraying (Laitem and Miller, 1954; Rathbone and Tarpley, 1959).

A weighing machine of standard markings in kilogram unit for weighing (NAS, 1974).

A vertical rod and scale that could be fixed on the wall and is capable of measuring height to an accuracy of 0.5 cm. (Jelliffe, 1966).

b. Precautions to be adopted

Measurements will be accurate if one removes the dress and stands straight. Body measurements should be taken carefully over a well fitted dress with set in sleeves over the foundation garments or smooth fitting under garments. (Nicholas, 1962; Reed, 1958; Carson, 1955). Erwin and Kinchen (1970) advise to avoid all bulky clothing. If there are no foundation garments measurements could be taken over a slip (Smith, 1968). In that case, it is essential to

locate the neckline, armhole, side seam and waistline and a cord tied helps in the above.

U.S.D.A., (1967); Ryan and Philips, (1947); Both Hepworth (1960) and Hayden (1976) express that a narrow cotton tape tied around the waist will act as a guide. While Bakshi (1958) stresses that it is essential to take measurements in a sequence Baxter et al., (1951). Baxter and Latzke (1949) and Carson (1955) stress the need for maintaining accuracy in both measuring as well as in checking and recording these measurements. All measurements should be taken by the same person views Wilson (1955) as it will help to avoid errors or variation.

The subject should stand in a relaxed position, can be engaged in conversation, when chest measurement is taken. One must start measuring from the right side of the person. The larger metallic end of the tape should be used to measure length and shorter metallic end to measure round the body (Bakshi, 1958). It is much faster to take all crosswise measurements at one time and then all length-wise measurements. (Carson, 1955). While measuring length, tape must be kept absolutely straight, parallel with spine or centre front: also care should be taken to start and finish measurements at correct points. When taking round measurements one should take such precautions that the tape does not sag. The tape should be parallel with the floor while measuring bust, waist and hips (Doongaji and Deshpande, —).

All measurements should be taken closely but not tightly and without allowance, ease or style or fullness (Hepworth, 1960; Hillson, —). Working in front of a mirror while taking measurements is helpful (Faiola, 1977).

6. Methods of taking body measurements

a. Neck to shoulder

From base of neck behind the ear, to edge of shoulder, at the sleeve seam, is designated as width of shoulder (Hillson; Picken, 1957; Faiola, 1977).

b. Centre back length or waistlength

From cervical bone at base of neck at the back to waistline. (Goodman, 1958; Fisher, 1973; Erwin, 1949).

c. Back Waist Length

From the highest point of shoulder at neck to waistline (Doongagi and Deshpande, — ; U.S.D.A., 1967).

d. Centre Front Length

From the neck point to waist length (Bakshi, 1958) or to desired length (Kumar, 1962; Hall, 1943), over the highest points of bust (Doongaji and Deshpande, —).

e. Front waist length

From shoulder seam at the base of neck, over the fullest part of the bust to the natural waist line (Goodman, 1958; Simplicity, 1958).

f. Sleeve length

From top of shoulder over the arm up to desired length (Wilson, 1955; Lynch and Sara 1950; Faiola, 1977).

g. Total Sleeve length (outer)

From the top of armhole to the wrist over the elbow with arm in bent position (Carson, 1955; Rathbone and Tarpley, 1959).

h. Total Sleeve length (inner)

From the muscle that joins the arm to the base of thumb at the wrist with arm straight (Ryan, 1944).

i. Shoulder to elbow

From top of armhole, that is the point of intersection of the shoulder and armscye line to the point of elbow (Golden hands, 1975; Iowa Home Economics Association, 1963).

j. Shoulder to bust point

From shoulder at base of neck, to highest point of bust (Doongaji and Deshpande).

k. In between bust points

Between fullest parts of bust with tape parallel to floor (U.S.D.A., 1967).

l. Waist to heel

From waistline straight down the center back to the floor, barefoot. (Ryan, 1944).

m. Waist to ankle

From the waistline straight down to the ankle at centre back (Pandit, 1967).

n. Waist to knee

From waist line at the side of the body, down to knee, which is straight (Hepworth, 1960).

o. Waist to thigh

From waist to hip level, located at the lower hip bone on the side of the hip (Goodman, 1958).

p. Thigh girth (straight)

Around the leg where the thigh is the largest, an inch below the lower part of the crotch (Mauck, 1958).

q. Thigh girth (slant)

A round the thigh two inches above the thigh girth (Reed, 1958).

r. Crotch length (total)

From the waist line in front between two legs upto

waist line at back (Goodman, 1958; Rathbone and Tarpley, 1959: Stuart, 1971).

s. Chest width back

Across the back between armhole lines, across the chest from armhole to armhole (Mansfield, 1953: Carson, 1955).

t. Back shoulder width

From one end of shoulder line at top of one arm across back of neck, to top of another arm at the end of shoulder line. (Juveker and Juveker, 1956: Juvekar and Juveker, 1958).

u. Chest width front

Across chest from armscye to armscye about five inches below the highest point of shoulder (Rathbone and Tarpley, 1959). The width across the chest half way down between the shoulder and underarm (Bull, 1958).

v. Armscye round

Keeping the arms in normal position, the tape is passed around the armscye (Goodman, 1958; Wilson, 1955).

w. Upper arm round

Around the fullest part of the upper arm (Bull, 1958: Ryan, 1944).

x. Elbow round

Keeping the arm slightly bent around the elbow (U.S.D.A.,1967).

y. Lower sleeve circumference

Around the arm, above the elbow (Mansfield, 1953).

z. Armscye depth

From curve of arm outward in a parallel line to centre front until the point is reached where the arm gets detached from the body. (Ryan and Phillips, 1947).

Others :

Round neck

Tape taken around the level of hollow of neck at the back (Kumar, 1962; Devadas, 1968).

Rust or chest round

Four inches below the base of neck, around the chest, under the arms, straight across the back, the tape kept parallel to waistline and hipline (Young, 1938) Tape held over the shoulder blades at the back and over the bustline in front with two fingers inserted into the tape (Hepworth, 1960; Hillson, — ; McCall, 1972).

Waist round

Tape passed straight around the natural waist line, the smallest part of the body (Carson, 1955; Hayden, 1976).

Where the body creases when bent forward or to the side (Mansfield, 1953).

Hip round

Below the waist line and around the hip, loose enough with tape kept parallel to floor (Bull, 1958; Latzke and Quinlan, 1935).

Crotch depth

With infant seated on the chair, and seat is measured from side waist point to chair. (Hayden, 1976; Hepworth, 1960).

Height

Child is made to stand on the floor, bare foot, with feet parallel, shoulder and back touching the wall, where a scale is fixed. With head held erect and a block placed and pressed gently over the head, the measurement is recorded. (Ghosh, 1976; Jelliffe, 1966).

Weight

Child is made to stand barefoot on the platform beam balance with minimum clothing and correct body posture and the reading is recorded (Jelliffe, 1966).

7. Pattern Making

Successful dress designing for an individual begins with a pattern of the right size based on actual body

measurements (Erwin, 1961). The 19th century gave birth to the invention of patterns. Butterie prepared the first paper dress patterns for children's and women's dresses (Lester and Ker, 1956; Craig and Rush, 1954). The five standardised patterns are Advance, Butterick, McCalls, Simplicity and Vogue (Bishop and Arch 1959). Wingo (1953) puts forth money spent on a good pattern is a good investment. Goodman (1958) claims that a beautiful garment well made from a pattern design suited to an individual is a source of satisfaction. The main points to be remembered in pattern making, according to Hillson (—) are accurate measurements, precision in detail and careful cutting.

The choice of a pattern contributes to excellent fit in clothes (Sommerfeld, 1946). Little alteration may be needed in a pattern provided a style and size best suited are chosen (U.S.D.A., 1967).

The three ways of obtaining a pattern are,

(1) by making a block pattern to an individual's measurements

(2) by modelling

(3) by purchasing a trade pattern (Giles, 1972)

Block patterns are drafted according to body measurements to give a perfect fit, and any style can be adapted from the above. In modelling, the material is draped on the figure in the style required and cut. Provided money is well spent a good trade pattern gives good fitting and style. These

readymade patterns available in different sizes and designs are helpful to home sewers (Bakshi, 1958). Block patterns fit the individual figure, they allow for originality of the design, they are inexpensive and quickly prepared opines Holt (1960).

a. Methods of pattern making

According to Hanna (1922) patterns can be made by drafting, free hand cutting and modelling each method adapted to the making of certain types of patterns. Basic patterns, as sleeve and skirt are drafted or drawn on paper or cloth. Patterns for pockets and collars are made by free hand cutting whereas patterns for garments of unusual designs are generally modelled. Patterns could be made by drafting, draping and flat pattern methods, express Erwin and Kinchen (1970), Latzke and Quinlan (1955).

b. Drafting

Drafting is a system of drawing patterns with mechanical precision based on accurate body measurements (Erwin and Kinchen, 1970; Hillson, —). The block prepared is cut out on paper or muslin and fitted to the figure and assured for correct fitting and adjustments are made if needed. This is cut out on cardboard or stiff paper to make a pattern that can be kept all the time views Hillson (—). According to Hanna (1922) drafting appears to be the best

method of studying patterns apart from its practical value as pattern making. A block pattern, of prepared by drafting and adopted to style, proves to be more economical (Hepworth, 1960).

c. Draping

Draping method is one where pliable cloth is draped over the dress form or human figure and the design lines are drawn directly on it. (Hardy, 1948; Latzke and Quinlan, 1935; Hepworth, 1960). A dress form made to one's own measurements is a profitable investment (Horner, 1954). Hepworth (1960) states that modelling is largely used on the trade, by draping different styles, directly on the model. Erwin and Kinchen (1970) feel that draping is a more expensive method but achieves artistic results as the design is created in harmony with the fabrics, at the same time, giving more confidence in fitting and restyling garments. The disadvantage pointed out by Latzke and Quinlan (1935) is that it includes the simultaneous process of designing and shaping both by darts and cutting them demanding knowledge, skill and technique.

d. Flat patterns

Flat pattern designing is the most widely spread method, and it is baded on the manipulation of simple foundation pattern which is modified by specific directions to create the pattern for a chosen design (Hollen, 1961). The

basic pattern may be called a sloper, block, master, or foundation pattern and has no seam allowance. It consists of five pieces, bodice front, bodice back, sleeve, skirt front and back (Erwin, 1960).

Designing clothing by means of a flat pattern has many possibilities for the home sewer. It gives the advantage of an original design, of her own, or an adaptation of an actual garment, for which commercial pattern is not available (Evans, 1957).

e. Commercial patterns

Commercial pattern is a flat pattern in which the technique begins with basic pattern (Hollen, 1961). These are made according to certain standards of body measurements approved by the Measurements Standard Committee for the entire pattern industry (Simplicity, 1958; Meredith Publishing Co., 1961). Patterns are of two types one in which the markings are done with perforations and the other in which the markings are printed on each pattern piece (Jones and Burnham, 1958).

Pattern also provides the instruction sheets giving directions for making the particular design, which includes the use of proper fabrics, preparation of fabrics, pattern adjustments, layout, cutting, step by step directions and diagrams for constructing garments remark McCall (1972). Since many styles in commercial patterns are seen in pattern

envelopes showing design variations, one has to select the styles intended for use. The style chosen, the width of material, the size of pattern all affect the amount of fabric needed opines Bane (1956). It is necessary to adjust most commercial patterns making changes on the structural lines of the patterns (Baxtre and Latzke, 1949). Alteration of the pattern should be made after it has been fitted to the body and after the places that need alteration have been determined. (Goodman, 1958). The pattern size can be enlarged by slashing the different sections where alteration is needed.

G. Consumer Preferences and Purchases of Clothing

Clothing, according to Raji (1973) is the second in the triumvirate of fundamental necessities. Clothing serves three basic needs, physical, social and psychological (Bonde, 1950). Clothing is used for decoration, to show individuality and social superiority (McJimsey, 1963).

Changing life styles, technological developments in textiles, and international trade have brought about changes in the clothing preferences of today's consumers. They want a multitude of textile product benefits such as durability, convenience, price, performance and fashion (Lyle, 1976). Consumers of today tend to prefer clothing that is aesthetically attractive, socially acceptable, physically comfortable and at the same time caters to easy maintenance

(Alexander, 1977). Because of the multiplicity of clothing needs the selection of clothing fabrics amidst wide variation of materials, is one of the most difficult tasks for consumers (Hess, 1966).

1. Fibre preferences of consumers

A large scale survey conducted by Silk and Art Silk Mills Industries Research Association (SASMIRA, 1967) on consumer preferences for different types of fabrics in Bombay city revealed that cotton was the most preferred fabric among all the communities of the educated classes. The second preference was for synthetics, while the blended fabrics stood third (Parikh et al., 1970).

The findings of the survey conducted by SASMIRA on consumer preferences for different types of fabrics according to Trivedi (1968) revealed that the problem solving and service giving characteristics of synthetic and blended fibre fabrics had made a great impact on consumers, with the result, their wardrobe underwent a change. Parikh et.al., (1970) surveyed the consumer preferences for manmade textiles for SASMIRA. They concluded that with increasing income, education and development of economic and social values in keeping with the rising standards of life, the general preference among the people indicated a growing liking and acceptance of manmade textiles over cotton.

According to Rajagopalan (1971) the SASMIRA study revealed that lower income groups preferred manmade fabrics since they offered economic advantage. In the place of a dozen cotton garments, the common man can manage with one quarter dozen manmade fibre garments although their initial cost is higher, for the simple reason, these garments possessed qualities of dimensional stability, anticrease, light weight, easy care and long wear, which natural fibers do not possess. Thus what was invested in the initial purchase was virtually returned in terms of services with no additional expenditure.

SASMIRA (1977) studied also consumers' attitudes towards textiles in the context of multifiber concept. The study revealed that the consumer preferences were more for synthetics than rayon, despite price difference, and the demand for pure synthetic fabrics was equal almost to the demand for blended and mixed fabrics. However in terms of fibrewise possession, cotton fabrics occupied first place mainly due to undergarments because of their continued use at home.

SASMIRA's (1978) study to assess consumer concept of product quality showed that the quality of textile fabrics was the prime factor which motivated the consumer at the time of purchase followed by price, design, comfort, colour and current fashion. The consumer survey conducted by SASMIRA (1978) in five villages of Maharashtra revealed

that the major consumption of textiles was cotton. Among service personnel and professionals there was some awareness of manmade fibre textiles. The consumption of manmade textiles, in the rural areas was about 10 per cent of total consumption only (Textile Magazine, 1978).

Some other studies have also been conducted in different states of India regarding consumer preferences and purchases of textiles. Studies conducted in Rajasthan and Uttar Pradesh showed that fiber preferences varied considerably with age, occupation, level of income and education. Of the four variables income appeared to be the most important factor influencing fiber preferences. Cotton was the best choice for a majority of garments, the main reasons being comfort, low cost and durability. Ninety per cent of the respondents gave their first preference for cotton in Tamil Nadu, while a third of the respondents gave rayon and synthetics also as their most preferred fiber. As per the consumer preferance survey conducted in Maharashtra state, the main advantages of cotton in respect of all garments as reported by the majority of respondents were low initial cost, wearing comfort, suitability for daily use and durability. Absence of easy care properties and the high maintenance cost were the drawbacks of cotton garments as pointed out by some of the respondents. Income, age, education did not indicate significant variations. However, occupationwise, the professional class complained more than

other classes about absense of easy care properties. While the main welcoming features regarding mixed and synthetic fabrics proved to be easy care properties, durability and good appearance, the disadvantages according to the respondents were high initial cost and lack of wearing comfort.

Trends in consumer purchases are studied and analysed carefully every year by the Market Research Division of the Textile Committee. The consumer purchases of cotton textiles per capita at all India level amounted to 11.72 metres in 1975 as against 11.85 metres in 1974 (Gidwani, 1977). As studied by the Textile Committee, consumer purchases of textiles in 1976 showed that people are shifting back to cotton from non-cotton and mixed fabrics in total purchases. An average household spent 11.3 per cent of the income on purchase of textiles. Among the household purchase of cotton textiles, purchase of sarees, ladies dress materials, dhotis, poplins, long cloth and shirting occupied important position. In mixed textiles polyester cotton shirting ranked first.

The fiber preferences showed that most of the respondents preferred cotton followed by rayon and synthetics. With improvement in income and education, the percentage of people preferring cotton decreased and those opting manmade fibers increased. Heavy purchases were done during festive months as September and October by urban people while among the rural folks the purchases took place during harvest times.

The study conducted by the Market Research Wing, Textile Committee on Consumer Purchases of Textiles (1977) revealed that per capita consumption in the household sector was 13.25 metres, and per capita availability was 13.42 metres. Both in the urban and rural areas the per capita consumption increased in spite of the fact prices of textiles registered an increase. The highest increase of per capita consumption was in polyester and synthetic fabrics and the lowest was for cotton. These fabrics recorded the highest increase of 52 per cent in 1978 (ITJ, 1980).

The U.S.Department of Agriculture (U.S.D.A.) has conducted studies on consumer preferances for textile fibers. One study (1956) was on 2379 male adolescents, 16 year old. Their preferences of textile fibers on selected clothing items revealed that cotton proved to be the outstanding fabric for most of the garments, the virtues of cotton being comfort, durability and launderability.

Consumers concepts of fabrics were studied by the U.S.D.A. (1959) on 2800 home makers. The study revealed that consumers were interested in pleasing fabrics requiring a minimum upkeep. Cotton was judged as the most versatile fiber for summer use and was considered suitable by the majority of the respondents.

A nationwide study on women's attitude towards cotton and other fibers in clothing was conducted by the U.S.D.A.

(1961) on 2310 women. The findings revealed that cotton and nylon were the best known materials.

Women's opinions of cotton and other fibers in selected clothing apparel were elicited by the U.S.D.A.(1956) from 2287 women. Ninety per cent of the consumers praised cotton for appearance, style, comfort, durability and good laundering qualities and 83 per cent praised nylon for its launderability.

A nationwide study was conducted by the U.S.D.A. (1960) on 2476 mothers. Cotton was regarded as the outstanding fiber for children's clothing.

A study conducted by Rama Devi (1971) in Trivandrum city on consumer satisfactions with regard to cotton and synthetics revealed that cotton was used for daily wear for most of the garments, and synthetics for occasional wear. Clothing practices of college students were studied by Kusumakumari (1970). Majority of the students preferred and used cotton for saries and blouses.

Rema (1972) studied the extent of use of manmade fabrics in rural households in Coimbatore district. Though cotton ranked highest in the purchases made, around 90 per cent purchased manmade fabrics also.

2. Factors influencing clothing selection and purchases

A study conducted by the U.S.D.A.(1956) on Family Clothing Inventories and Purchases showed that other factors kept constant, the higher the income, the greater were the stocks of clothing on hand and purchases made by the families. Employment, social participation and occupation influenced clothing purchases. Cotton clothing was predominant in the wardrobe of farm families.

Consumer preferences in clothing selection in Coimbatore city was studied by Vijayalakshmi et al., (1970). They found that income seemed to have greater association with preference for material than did sex, age and education. Among the majority of the consumers, cotton proved to be the most preferred material, the reasons being simplicity, economy and comfort.

Clothing practices of selected rural and urban families at Coimbatore as studied by Sivagnanasunderi (1972) showed that rural families spent 5-10 per cent of their income on clothing and urban families 16-20 per cent. Most of the purchases were done during festive occasions. Cotton was most commonly used and purchased. Pothan (1972) studied the expenditure pattern of high and low income families at Coimbatore city. The low income group spent 13-16 per cent and high income group 8 per cent of their income on clothing. Both income groups revealed a preference for

cotton. Price and quality were the factors considered in fabric selection.

Indirani (1974) studied clothing materials used by families of different income levels in Coimbatore city. Her findings revealed that as income increased, the money spent on clothing increased. Cotton and terecot fabrics were mostly preferred.

Textile purchasing habits of selected home makers were studied by Seethalakshmi (1972) in Coimbatore city. She found that clothing expenditure as a percentage of total expenditure decreased with increase in the income levels.

Jayalakshmi (1972) studied the socio economic factors associated with clothing purchasing habits of selected families in Coimbatore city. She concluded that income influenced the textile purchasing habits of the people.

From her study Joyce (1966) concluded that while quality proved to be the deciding factor in the choice of clothing for homemakers of upper income group, both income and quality were the influencing factors for the middle income group. But income alone proved to be the deciding factor for the low income group.

Clothing consumption pattern of urban families was studied by Thackenkary (1980). Income, family status and

price were the main factors that influenced clothing selection. The most preferred material was cotton followed by terecot, nylon and polyester fabrics.

It is clear from the above studies that income seems to be the deciding factor in clothing purchases. Cotton is the most preferred fabric by consumers, though the trend seems to be towards synthetics and blends.

3. Selection of clothing for children

Clothing plays an important role in a child's life. (Prudden, 1964). Clothes are made for children, not children for clothes. (Mc Call, 1962). Proper clothing gives a feeling of satisfaction, self confidence and hence clothes for children should be chosen with care (Young, 1938). Corke (1957) is of the view that the needs of children should be always considered. Children's clothing should have attractive designs and stress simplicity (Rathbone and Tarpley, 1959). Young (1938) opines that boy's clothing should be more masculine and girls' more feminine.

Hutt and Gibby (1962) claim that by the age of two years, most children develop some interest in dressing themselves. Keister (1967) opines that child's dress must be designed for freedom in play, ease in dressing and undressing without the help of grown ups. Chambers and Moulton (1961) point out that children have definite ideas regarding their clothing needs and must be given a chance to select garments.

In the estimation of Gesell and Frances (1949) preschool year is the age of temper tandrum of clothing. Thompson and Mea (1949) exhort that clothing is a fundamental factor in the character building of a child, from the standpoint of material, construction, fit and design. Properly fitted comfortable clothes according to Tate and Glisson (1961) promote an attractive appearance or disposition. Clothing that restricts activity exerts an unfortunate effect on the child's disposition. Clothing suited to his activities enables the child to develop desirable attitudes toward clothing (Good year and Klohr, 1965). Alexander (1977) agrees with Oerke (1957) in that preschoolers' garments should be simple, functional, make provisions for growth and freedom of movement. Size is an important factor in preschoolers' garments (Goodspeed et al., 1953). Large clothing is uncomfortable and makes the child self conscious and small clothes hampers his growth and interferes with his movements. Considering the rapid growth during this age level, Pandit (1967) advises a few garments that will serve all occasions and purposes.

Troelstrup (1957) points out right clothes, worn well, gives a mental stimulus to the wearer and promotes an air of confidence. Clothes are a symbol of security, they make a contribution to the process of growing up. Clothes can help to make the man, opines (Read, 1950). Hurlock (1970) stresses the importance of appropriate clothes that

fit the child's needs and interests. Clothes according to him must give freedom for action, be sturdy, allow for self dressing and suit weather, must be of suitable weight and promote good posture.

Brisbane and Ricker (1965) opine that children become concerned about what they wear, and have definite likes and dislikes and some become attached to a favourite garment. During this stage, group identification, the approval and admiration of friends become important to him. The child becomes very conscious of the clothing his peers wear and wants to look like them (Oerke, 1957; Hurlock, 1956). In the opinion of Devadas (1968) an appropriate costume ensemble will contribute to the development of a wellpoised individual, who is ready to take part in group activities.

a. Selection of fabrics

Goodman (1958) points out that the ability to choose suitable fabrics intelligently for making children's garments is an accomplishment. The main purpose of clothing is protection (Fitzimmons, 1961). It protects him against the elements of nature (Oppenheim, 1965). The type of fabric selected bears a direct relation to the health of the child. Oerke (1957) and Tate and Glisson (1961) stress on fabrics that facilitate circulation of air. Mc Call (1962) and Latzke and Quinlan (1935) opine they should maintain body temperature moisture absorption and evaporation. Wearability and

washability are to be given main considerations (Pandit, 1967; Chambers & Moulton, 1961; Faeger and Anderson, 1958). Washability, fit, material and finish form the criteria in the selection of children's wear. (Lund, 1962). A firmly woven fabric treated to restrict dirt and wrinkles is suggested by Thompson and Rea (1949) and knit fabrics for children's underwear as they are stretchable.

Unwin (1967) stresses the need for having additional garments for all seasons. Garments must be simple in style and must withstand hardwear. Mc Call (1962) and Pandit (1967) opine medium or light weight cotton of good quality is an excellent choice of material for young children in tropical climates. While Rathbone and Tarpley (1959) claim that cotton and linen are better than other materials Tate and Glisson (1961) and Meister (1967) assert that cotton is the most important fabric for children's wear. In selecting clothes for children, the reason, use of material that is becoming, cost, amount needed, weave and material ease to handle in sewing must be considered. (Carson, 1955). Hardy (1948) and Woodman (1958) conclude that cotton fabrics are the ones that will fulfil these requirements. They are relatively inexpensive, comfortable and serviceable, pretty and becoming, easily cared for and easy to work with and can be attractively styled. It is mere waste to spend on expensive materials as preschoolers outgrow their clothes quickly (Goodspeed et al., 1953) and many dresses discarded

by adults can be remodelled for children (Hall, 1943; Horner, 1954). Pandit (1967) and Young (1938) point out that clothing has a definite effect on the mental and emotional development of the child. Colour is as meaningful in a child's life as in adults. (Goodman, 1958). Colours influence psychologically the feelings and behaviour of children. Colour expressions differ and they may be chosen to explain or modify an individual's personality (Featherstone and Mauck, 1958). Colours must be suited not only to individual colouring but to age, size and personality of the child and also to the occasion for which it is to be used (Young, 1938). Child's likes and dislikes must be considered as far as possible in the selection of colours in fabrics. (Goodman, 1958). The colours of a child's dress should never predominate his personality (Thompson and Rea, 1949). Clothing should be in subdued hues as young complexions are delicate in colouring. Since children prefer bright colours, Hardy (1948) opines gay colourful garments can be created. Rich colours that show not the dirt are more popular and practical. (Stuart, 1971).

According to Bull (1958) mothers choose light colours for their children as they show when they should be washed. Colour makes the skin look healthy and emphasizes one's best features (Todd, 1952).

Story (1930) remarks navy blue, red, shades of dark brown and tan are some of the colours used for children's

wear. Mc Call (1962) stresses that children love bright colours especially red and orange.

Pandit (1967) feels colours for a boy may be darker to avoid the feminine effect of the delicate pastel shades. The colour and design of the garment chosen should be acceptable to the child, lest the garment may be the centre of storm scenes view Baxtre and Latzke (1949). Narrow stripes, small dots, tiny figures and checks, plaids and gingham in plain colours and cotton printed in attractive colours look charming on children (McCall, 1962; Pandit, 1967).

b. <u>Factors to be considered in making children's clothing</u>

Children's garments should be provided with self help features, (Lewis et al., 1960). Some helpful suggestions offered by Rathbone and Tarpley (1959) for providing self help features include large front opening, large or medium sized buttons and simple style with one piece garment. Such features as small buttons, hooks and eyes, bows, thread, loops and back opening be avoided feels (Oerke, 1957) as they will wet and self help in dressing.

Fisher (1973) advises to choose basic styles that are quick to make, easy to fit and simple to alter as the child grows. When you are sewing for youngsters, you are sewing for growing, opines Carter (1971) and clothes that fit for more than one season are recommended. Tate and Glisson (1961) recommend construction features as hems,

tucks, pleats and gathers to make provision for growth.

Oerke (1957) stresses on good workmanship in children's wear. The necklines in children's wear must either be bound with bias or finished with a collar thus preventing it from stretching (Meredith Publishing Co., 1961). Seams should be soft and flat to prevent irritation and should finished as securely as possible (Thompson and Rea, 1949). If pinked and bound they are durable for heavier cottons (Oerke, 1957). While for children's dresses Pandit (1967) considers plain seams as suitable Young (1938) feels French seams are neat and can withstand strain and so desirable. Hemming is used to fasten a low edge (Doongaji and Deshpande, —). Broader hems stitched on the machine are recommended by Thompson and Rea (1947) and Stuart (1971) to prevent finger toes getting caught.

Plackets used on waist lines, neck lines must be strong, easy to fasten, and long enough to dress and undress with ease. (Lewis et al., 1960). Fasteners must be as flat as possible. (Tate & Glisson, 1961). Sharp or pointed edges or long sparks that might injure the child must be avoided. Buttons must be chosen before button holes are attempted, since width of buttons vary (Hayden, 1976) ; buttons covered with fabrics do not withstand wear. Buttons must be tested through buttonholes to ensure if they are of correct size. Buttonholes should be neither large nor too

small (Goodman, 1958). Fastenings should be of the simplest kind and capable of being manipulated easily by the child (Hulme, 1948).

A good decoration should enhance the beauty of a garment. Decoration is intended to enrich a garment and it should be of better quality than the fabric in the garment and undergo the same wear as dress (Erwin and Kinchen, 1970).

The purpose of trimming is to enrich, beautify and give character to the costume (Featherstone & Mauck, 1944). Trimmings may be either decorative or constructive (Thompson & Rea, 1949). They may be self or commercial trims but Young (1938) recommends self trim as it is sturdy, inconspicuous and gives individuality. Commercial trimmings are not desirable. Darts, pleats, tucks and gathers which enclose fullness also add to decoration. (Doongaji and Deshpande, —).

Pockets add to the pleasure and satisfaction of the child. So Rathbone and Tarpley (1959) stress the above in children's wear. They may be patch or set in, feel, Erwin and Kinchen (1970). The five essential factors to be considered while selecting garments for children according to Wingo (1953) are: "grain, design, seams, hems and fasteners".

4. Readymade, tailormade and homemade clothing

a. Readymade clothing

In this era of specialisation and industrialisation every article of clothing one wears can be purchased as readymade. Hence in every home the selection of readymade garments becomes necessary.

Dress making according to Sundaram (1977) is one of the most rewarding forms of handicrafts. A knowledge of good sewing methods is of immense value in judging readymade clothes (Haris et al., 1950). This knowledge can be best acquired by making clothes, opine, Laitem and Miller (1954), since it will help in the wise selection of readymade goods.

Readymades are made in the factory with no one purchaser in mind. (Mauck, 1958). The ready to wear market has many sizes for different types of figures and this enables most women to supplement their wardrobes with these types of clothes.

The problem of dress can be easily solved by buying clothes as readymade (Mcgowan and Waite, 1927). The choice of styles and materials is so wide that one often finds artistic designs and colour combinations beyond the power of the average dressmakers. By buying readymade garments women can be free from constructing garments and time is saved. (Lynch and Sarah, 1950). It is easier to buy a dress all

ready to wear in a style and colour becoming to a person (Carson, 1955). A large variety of styles, in dresses are available for selection in readymades with a better finished look than the home made. Since attractive clothing is available at various prices to suit varied needs and interests it is possible to be well dressed at different income levels (Oppenheim, 1965).

Often ready to wear need expensive alterations (Mauck, 1958). It is often difficult to find a readymade dress that is satisfactory in every detail and at a price one can afford to pay. (Erwin, 1960). The readymade trade cannot cater to every individual problem (Stuart, 1971). By buying readymade clothes one may have more time but must be content with fewer outfits because of the high cost. Though a variety of styles are available in readymades often they are characterised with decorations which pose laundering problems (Tate and Glisson, 1961). A large part of the price charged for ready to wear is due to the cost of labour in making them. (Jones and Burnham, 1958). Ready to wear garments seldom give as good a fit as clothes made at home (Meredith Publishing Co., 1961).

Readymade clothing is considered to be costlier by Indian consumers than tailormade ones. If the market for readymade clothing in India is to be extended to semi urban and rural areas, the industry will have to effect cost and price

reductions so as to bring the total cost more or less at par with the tailors. Since the tailor's charges are also going up this would prove less difficult than it would otherwise be feel Narayanaswami and Sri Ram (1972).

b. Tailormade clothing

A beautifully tailored garment in reality is a true work of art. Mane (1974) points out the need for modifying the art of tailoring to suit the demands of each new fashion season. The beauty of design for the tailored garment depends on a few simple lines rather than elaboration of design (Baxtre and Latzke, 1949).

Strickland (1956) remarks that tailoring requires adequate time, the best of one's sewing ability, giving accuracy in detail and careful workmanship. Tate and Glisson (1961) state that tailormade clothing may be more or less expensive, than buying readymade clothing depending on dressmaker's fee, the cost of the fabric, patterns and trimmings. Difficulty in fitting, flair for designing costumes, but lack of skill in garment construction are the main reasons for employing dressmakers by women for executing their original ideas.

Mauck (1958) outlines three types of tailoring namely the custom tailoring, tailoring made to order, tailoring made in the factory. Custom tailoring is done by highly

skilled tailor, carrying a high initial cost but the customer receives individuality of design, fit and shape. Tailoring made to order is done by the retail stores with customer's measurements. After selecting the design, the outfit is made; fitting is tried and alterations are made and it is inexpensive. The factory made garment is made with no one purchaser in mind and price is comparatively less.

Chambers and Moulton (1961) remark that tailors would shape and mould at right places and thus build permanent shaping in garments. Getting garments tailormade is as expensive as buying them readymade, but they probably will have a better quality of material and workmanship and a dress which is less likely to be duplicated, opine Rathbone and Tarpley (1959).

C. Homemade garments

Dress designing and making are living arts. Home sewing is a combination of art and science. (Bane, 1974). Designing and making one's own clothes can be a creative experience of real value (Nickell and Dorsey, 1976). Clothes making according to Kumar (1962) contributes to profitable use of time, proper dressing habits, with good taste and economy. It forms a rewarding and remunerative career to those who enjoy sewing thus supplementing the family budget. (Lewis et al., 1960). But if one is not sure about the choice of style, pattern and fabric to use, then costly mistakes can be made (Family Circle, 1979).

The woman who makes clothing at home, has a wider range in the selection of colours, style of dress, type of pattern and choice of fabric, than does the person who buys readymades and garments can be made to fit perfectly (Needlework Development Scheme, 1956 ; Goodman, 1958; Dermott et al., (1972). According to Pollard et al., (1964) homesewing would help to ensure style, and quality, that will last several seasons apart from keeping clothing costs down. Wingo (1953) remarks it not only helps to save the cost, but individuality in clothes and better fit are obtained and also it ensures a longer wearing period. Marked figure defects may make selection from ready to wear stock impossible (Baxtre and Latzke, 1949). The materials for homemade garments cost one third or half, the cost of readymade garments of comparable quality state Dermott et al., (1972). Not only they cost less but they consume a small quantity of material (Lund, 1962).

Bane (1958) feels if home sewing is to be successful, the home sewn garment must be smart, fashionable and must have the finished look of custom made garment. The advantages of home sewing according to her are: it gives an accurate fit for every figure: beautiful fabric can be utilised: money is saved: excellent construction is achieved. Stuart (1971) claims making clothes at home reveals one's love of fashion, and the creation of a personal version of the latest style.

A study conducted by Kapen (1976) on home sewing practices revealed that the actual amount saved by the selected thirty families for a period of three months varied from Rs.30-110 depending on their leisure time.

5. Studies conducted in purchase of Readymade garments

The Market Research Division of the Textile Committee of the Government of India conducts from time to time studies in different states of India, in regard to consumer purchases of readymade garments. The proceedings of the Market Research Conference of 1969 revealed about 22 per cent of the respondents purchased readymade garments. The purchase of readymade items were more common in urban families as compared to rural ones, and in higher and middle income levels than in lower income levels. While children's wear happened to be the most important items purchased, shirts and pants came next. Ready availability, good appearance and cheapness were the benefits. High cost, poor fit and lack of serviceability were the problems.

According to the proceedings of the Market Research Conference 1972, an average household on all India level spent around Rs.18/- on ready to wear, shirts being the main items of purchase. A study conducted in Tamil Nadu in 1969 showed that the consumers purchased readymade varieties to meet the urgent need. They were stated to be cheap and they saved the stitching charges. Men's wear were popular in

towns whereas in rural areas children's wear were more purchased. Non availability of garments in required sizes and designs were the main problems.

In Andhra Pradesh 85 per cent of the households never purchased readymade items, the main reasons being high cost, non-availability of required sizes, and lack of durability. Good appearance, fashionables stitching, lower cost, and meeting emergency needs, were the causes that stimulated a few to purchase them.

In Kerala State (—) shirts, bush shirts made out of terelene formed two thirds of the items produced, the other items being trousers and half pants and children's wear such as frocks and baba suits.

In Calcutta and Bangalore cotton readymade garment varieties were on demand and the mostly purchased items were trousers, bush shirts, baba suits and frocks. Sales turnover depended on quality of cloth used, design, fashion and style of garments.

In Uttar Pradesh (—) readymade garments were not popular. Hardly 12 per cent, mostly from urban areas, purchased such items as shirts, bush shirts, frocks, and baba suits. While cheapness and catering to emergency needs were the main reasons for purchasing readymade items, the most important reason for not purchasing them were non-availability of varieties in the required sizes.

The tailoring done in children's garments was not upto the satisfaction of respondents in Rajasthan (1968). This was the reason for their purchasing readymade garments. Readymade items, mostly children's wear, were purchased by 28 per cent in urban areas and 36 per cent in rural areas. Lack of good fit and high price were the causes for others not purchasing them.

In the States of Rajasthan and Uttar Pradesh cotton was the best choice for all garments and in cotton more than 65 per cent both in rural and urban areas purchased handloom fabric garments, the main reason being cheapness, good designs and serviceability.

The study conducted in Maharashtra ( ) revealed that 25 to 35 per cent of the people purchased regularly readymade varieties, the most common items being shirts, pants and children's garments like baba suits and frocks. The habit of buying readymade items was prevalent in middle and higher income levels, the main causes being good fit and appearance, availability of latest fashions in good colours and designs.

Socio-economic classification proved to be the criterion, which influenced the purchase of readymade garments at Ludhiana according to the study conducted by the Ministry of Foreign Trade and Supply (1969).

None purchased readymade items at low income levels. At the highest income level this habit was very prevalent and this formed only 20 per cent of the consumers. The most popular garments happened to be shirts, bush shirts, frocks and baba suits. A good fit and stitching, cheapness, availability in good colours and designs with latest fashions were the causes for purchasing them. Cotton took the predominant share in the purchase of garments.

The consumer behaviour study in rural area around Anand in Gujarat (1966) revealed that only five per cent of the total population purchased readymade garments.

Thus in the different states, the consumers pointed out more or less the same merits or demerits of readymades. In all the states where the surveys had been conducted selected men's wear and children's wear only were popular for readymades and not women's garments, such as blouses or cholis.

The merits of readymade clothes are: they possess a good appearance, variety is available for selection with good designs and fashionable stitching; they save stitching charges, meet emergency needs, also they are cheap and give a good fit. The demerits include high cost, lack of durability in fabrics, due to the use of fabrics of inferior quality and poor stitching aspects, non-availability of garments in proper sizes and in suitable designs.

SASMIRA (1977) conducted a study on consumer preference for textiles and found that a high percentage of households possessed readymade garments. The popularity is indicated by the fact that 71 per cent possessed readymade items out of 1110 households surveyed. In the consumption of readymade items gents' wear topped the list. While ladies wear were comparatively less, children's wear accounted for only about 6 per cent, knit wear playing the leading role.

The study conducted on Consumer Purchases of Textiles during the year 1975-76 showed that readymade items made good strides since the purchases increased to 13 per cent. Cotton accounted to 90 per cent share in these garments (Ministry of Commerce, Government of India, 1976). The study conducted during 1976-77 revealed that the market size for readymade garments in quantitative terms was estimated at 740 million meters worth Rs.4778 million (Ministry of Commerce, Govt. of India, 1977).

The expenditure on readymade garments came to Rs.49 in 1977 as against 41 in the previous year, the highest family purchases were on shirts followed by frocks (Ministry of Commerce, Govt.of India, 1978). The market size for readymade garments in quantitative terms was estimated at 787 million meters worth Rs.6140 million. Cotton readymades accounted for a share of about 50 per cent and polyester cotton readymades for a share of 14 per cent in the total offtake (Ministry of Commerce, Govt.of India, 1979).

Ollimuthu et al., (1971) conducted a study on mother's preferences among readymade, tailormade and homemade garments of preschoolers. Around 60 per cent of the mothers preferred the combination of readymade and tailormade garments for their preschoolers. Current fashion trends and attractive colour combinations were the most important reasons for purchasing readymades. Quality of readymades was not satisfactory, as they needed improvement in fabric selection and price level.

Experimental Procedure

III EXPERIMENTAL PROCEDURE

The experimental procedure consisted of the following steps:

A. Study of the consumer preferences and problems in clothing selection

B. Standardising body measurements for selected women's wear and for preschoolers

C. Organising a garment unit for rural young women and training them in the production of clothing items, and

D. Evaluating the garment unit with reference to the training and production aspects

A. Study of Consumer Preferences and Problems in Clothing Selection

The consumer preferences and problems were studied under three categories through,

1. A survey on consumers regarding selected women's garments

2. A survey on consumers regarding their selection of preschoolers' clothing, and

3. Surveys on educated mothers regarding

   a) their choice of clothing for preschool boys and girls, and

   b) their problems in selecting readymade garments

1. Survey on consumers regarding selected women's garments

A Survey was conducted to find out consumer preferences and problems in selected women's wear such as the sari petticoats and cholis (blouses). The survey included the following major steps.

a. Selection of the area and sample
b. Selection of the method
c. Conducting the survey and
d. Analysis and interpretation of the findings

a. Selection of the area and sample

Proximity and availability of the desired sample for the collection of data were the criteria for selecting the sample. Since young women formed the sample they were available at Sri Avinashilingam Home Science College and this sample was within the reach of the investigator to conduct the survey. Two hundred young women between the age group of 18-30 years were selected for this study since these young women happened to wear the selected women's wear such as the sari, petticoats and cholis.

b. Selection of the method

Because the population happened to be an educated group, the questionnaire method was adopted to find out their preferences. The investigator prepared a detailed questionnaire to find out consumer preferences and problems

regarding petticoats and cholis. The questionnaire consisted of details on tailor made garments such as;

i. purchasing habits
ii. problems faced
iii. materials selected and
iv. suggestions for improvements

On readymade garments, the questionnaire considered

i. Sizes
ii. Type of materials preferred
iii. Type of petticoat and blouse designs preferred
iv. Texture and material and
v. Problems in ready to wear

The questionnaire was pretested on 25 candidates and modified as presented in Appendix III.

c. Conducting the survey

The survey was conducted within four weeks on young women who extended upmost cooperation, willingness and interest in filling up the questionnaire.

d. Analysis and interpretation of findings

The answers in the questionnaires were consolidated and analysed. The results are presented in detail in 'Results and Discussion'. The major findings are outlined in this chapter, since they formed the criteria for the procedures of research work.

2. Survey of consumers regarding preschoolers' clothing

A survey was conducted on consumers to study their preferences and problems on preschoolers' clothing. It included the following steps:

a. Selection of the area and sample
b. Selection of the method
c. Conducting the survey and
d. Analysis and interpretation of findings

a. Selection of the area and sample

Areas such as Velandipalayam, Kovilmedu, Jawaharpuram, Rathnapuri, Gandhipuram, R.S.Puram, Ramanathapuram and Coimbatore city were selected in view of the proximity of these places to the college campus. Three hundred consumers formed the sample, and they were selected at random from different income levels, on the basis, that they should have one or two preschool children and their family must be a nuclear one.

b. Selection of the method

Direct interview method was selected for collection of the data, considering the fact the response is greater and more accurate than any other method and all doubts could be clarified on the spot. Accordingly, an interview schedule was framed, which included the following aspects.

2. Survey of consumers regarding preschoolers' clothing

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a. Selection of the area and sample
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d. Analysis and interpretation of findings

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b. Selection of the method

Direct interview method was selected for collection of the data, considering the fact the response is greater and more accurate than any other method and all doubts could be clarified on the spot. Accordingly, an interview schedule was framed, which included the following aspects.

3. Conducting surveys on educated mothers on preschoolers' clothing

Surveys were conducted on 200 educated mothers, in regard to their preferences and problems in the selection of preschoolers' clothing.

The surveys included the following steps:

a. Selection of the area and sample
b. Selection of the method
c. Conducting the survey and
d. Analysis and interpretation of the data

a. Selection of the area and sample

The surveys were conducted in Coimbatore city. One hundred educated mothers who had one or two preschool boys and another hundred who had one or two preschool girls were selected as the sample for the study. The mothers were selected from the different nursery schools such as Sri Avinashilingam Nursery School, Christy Nursery School and Shanthi gardens. They belonged to the middle and high income groups.

b. Selection of the method

The questionnaire method was adopted for conducting the surveys on educated mothers. A questionnaire was formulated to obtain the following details:

i. Background information

ii. Money spent on family and preschoolers' clothing

iii. Sources of information for clothing selection

iv. Fabrics, designs, colours, textures and garments preferred in preschoolers' wear

v. Plackets, fasteners, trimmings and decorations preferred

vi. Problems faced in clothing selection for preschoolers and

vii. Child's influences in clothing selection

The feasibility of the questionnaires was tested by conducting pilot studies based on the light thrown by pre-testing, certain modifications were done and the finalised questionnaire is given in Appendix V.

c. Conducting the survey

The questionnaires were distributed through the help of the authorities of the selected nursery schools to the educated mothers and they were checked and collected by the investigator.

d. Analysis and interpretation of the data

The data were consolidated, tabulated and analysed and the major findings are presented in the Chapter Results and Discussions. The findings of the study formed the basis for further research work.

B. Standardising body measurements for selected women's wear and for preschoolers

This included two aspects:

1. Standardising body measurements for selected women's wear and for preschoolers
2. Developing patterns and evaluation of the standardised measurements.

1. Standardising body measurements for selected women's wear and for preschoolers

The experimental procedure for this aspect included the following steps:

Standardising body measurements for

a. Choli
b. Petticoat
c. Preschoolers

Standardising body measurements

a. Choli

This included the following steps:

i. Selection of the sample
ii. Grouping
iii. Taking body measurements
iv. Standardising body measurements

i. Selection of the sample

The samples for standardising body measurements were the young women students of Sri Avinashilingam Home Science College, Coimbatore. Size being the main consideration, age level was given secondary importance.

ii. Grouping

The samples were selected on the basis of bust measurement ranging from 67.5 to 92.5 cm (27" to 37"). Since most of the samples wore this garment, only in this bust range, these measurements were grouped into five classes. They were the following:

cm	Inch		cm	Inch
67.5-72.5	(27-29)	Bust size	70	28
72.5-77.5	(29-31)	Bust size	75	30
77.5-82.5	(31-33)	Bust size	80	32
82.5-87.5	(33-35)	Bust size	85	34
87.5-92.5	(35-37)	Bust size	90	36

Each class included 50 samples thus making a total of 250 samples. Even though the metric system is adopted in India for different purposes so far as garments are concerned the British system also is still in practice.

iii. Taking body measurements

After reviewing the works of Bakshi (1958), Kumar (1962), Juvekar and Juvekar (1956) and Doongaji and Deshpande (—) the essential body measurements taken into consideration for choli were:

1. Center back length
2. Center front length
3. Shoulder to bust point
4. Waist length
5. Sleeve length
6. Back shoulder width (Plate I)
7. Bust circumference
8. Waist circumference
9. Armhole circumference
10. Lower sleeve circumference
11. In between bust points
12. Height
13. Weight

iv. Standarding body measurements

Body measurements for choli were standardised based on bust measurements as commercial patterns are available on the basis of the above only.

BACK SHOLDER WIDTH- A MEASUREMENT REQUIRED FOR CHOLI

PLATE.I

i. Selection of the sample

The investigator selected 600 college girls between the age group of 18-25 years for standardising the measurements for petticoats.

ii. Taking measurements

The measurements taken were the waist, hip, length, from waist to ankle and waist to hip.

iii. Grouping

Commercially readymade petticoats are available in the market, based on length, for 90 cm (36"), 95 cm (38"), 100 cm (40"), 105 cm (42") and 110 cm (44") respectively. Hence length was taken as the standard for classifying the other three measurements, the hip, waist and waist to hip.

iv. Standardising body measurements

The length measurements of the selected samples ranged from 87.5 cm (35") to 107.5 cm (43"). The samples were classified based on length measurement following the discrete system. The modal value for the hip, waist and waist to hip for the particular length measure was determined and where this was ambiguous the median was taken into account. In certain cases the median was considered to be the lower limit to which one or two cm were added. With the above procedure, the hip, waist and waist to hip based on length measurements were tabulated and analysed. The grouping of length measure-

ments revealed that six groups could be tabulated with more than 30 samples in each length category. After tabulating the above the modal or median values were clubbed to form standard sizes described below:

cm.	Inch	cm.	Inch
87.5-92.5 →	(35-37)	Size 90	(36)
92.5-97.5	(37-39)	Size 95	(38)
97.5-102.5	(39-41)	Size 100	(40)
102.5-107.5	(41-43)	Size 105	(42)

Standardising body measurements

c. Preschoolers

This included the following steps:

i. Selection of the subjects

ii. Taking body measurements

iii. Grouping and

iv. Standardising body measurements

i. Selection of the subjects

A total of 850 children, 430 boys and 420 girls all preschoolers belonging to the age group of 3-5 years were selected as the sample for the study.

The subjects were healthy and had a good nutritional status. This age group was selected, because it was an approachable group through the nursery schools. Furthermore in children's apparel there is a vast scope for designing different styles of garments in this age group. The following nursery schools in Coimbatore City were selected.

i. Sri Avinashilingam Nursery school
ii. Chinmayananda school
iii. Koyal Preparatory school
iv. Bharati preparatory school
v. Sri Ram Nursery school
vi. Sasibalika Vidya Mandir
vii. Shanthi nursery school
viii. Vivekananda Nursery school
ix. Shanthi gardens
x. Avilla Nursery school
xi. Christy Nursery school and
xii. Preme Garden school

ii. Taking body measurements

The following equipment were used for taking body measurements accurately. A Detecto weighing machine made in the USA with adjustable device for accuracy was utilised for taking weights in kilograms. A meter scale was used to measure the height. A standard tape measure guaranteed as durable and non stretchable, marked in centimeters and having metal tips on both ends was used. In addition, scale, cord and tailors' chalk were used. Since it was not possible to obtain foundation garments, the measurements were taken over smooth fitting undergarments as the banians and panties (Plate II).

Before taking measurements, certain strategic points were located on the figure to serve as guidelines in establishing body lines as well as starting marks for the measurements. The markings were done on vertical lines with a chalk for centre front, centre back, side seam, and shoulder line. Horizontal lines of the body, the neckline, the waistline, the armscye, were held with a cord (Plate III). Likewise the upper part of the thigh, ankle and wrist, were tied with cord for accuracy in measurements.

To gain an insight into the measurements most essentially needed a preliminary review of literature was done. The measurements required for the construction of a variety of preschoolers' garments were outlined. In all, 30 body measurements which included height and weight for boys and girls were recorded in charts formulated for the purpose. The necessary precautions as outlined in the literature were observed to obtain accurate body measurements. The list of body measurements thus taken included the following:

CORD TIED AROUND WAIST LINE ACTS AS GUIDE FOR TAKING FRONT WAIST LENGTH MEASUREMENT

PLATE. III

i. Neck to shoulder

ii. Center back length

iii. Back waist length

iv. Centre front length

v. Front waist length

vi. Sleeve length (outer)

vii. Shoulder to elbow

viii. Sleeve length (inner)

ix. Waist to heel

x. Waist to knee

xi. Waist to ankle

xii. Waist to thigh

xiii. Thigh girth (straight)

xiv . Thigh girth (slant)

xv. Crotch depth (total)

xvi. Chest width back

xvii. Back shoulder width

xviii. Chest width front

xix. Armsaye round

xx. Upper arm round

xxi. Elbow round

xxii. Wrist round

xxiii. Armscye depth

xxiv. Neck round

xxv. Chest round

xxvi. Waist round

xxvii. Hip round

xxviii. Crotch depth (seat)

xxix. Height

xxx. Weight

The above measurements were listed out in the guide sheet in the order in which it would be easy to take, involving minimum movement and causing least irritation to the preschooler. At the outset rapport was established with the child. The child was engaged in conversation and the purpose of taking the measurements was explained to him while getting acquanted with him. The children generally had immense comprehension and extended in most cases, maximum cooperation. The measurements were taken and recorded in the metric system. Besides the body measurements the age and sex of the child were also recorded. The age was verified from the records maintained by the school authorities.

iii. Grouping

Children's paper patterns are graded by chest measurements. (Picken, 1949; Bane, 1973; Fisher, 1973; McCall, 1972; Family Circle, 1979). Hence in selecting patterns for children the chest measurement was decided to be the standard since children of the same age range vary differently in height, weight and body build.

From the measurement charts, the body measurements were transferred to cards which had been specially printed for the purpose. (Appendix VI). As chest measurement forms the basis for sizes it was taken as the main measurement, for grouping the other measurements.

iv. Standardising body measurements

Bust groups consisting of 20 and more children were taken up for further tabulation. Under each bust measurement, the rest of the body measurements were grouped and the modal value for each body measurement belonging to that particular bust size was determined, following the discrete series system. The mode or modal value is that value in a series of observations, which occurs with the greatest frequency (Gupta, 1981). According to Saxena, (1970), mode shows the commonest results, that is most often obtained and is of very general application. The mode rather than the average in chest measurements is the number most suitable in readymade clothes. Wherever the modal value gave an ambiguous picture, the median was determined. The median was considered as the lower limit to which one or two cms were added and this was decided to be the actual value for the particular measurement. Using the above procedure, the central tendencies of the 27 body measurements were tabulated and analysed. The grouping of bust size revealed that eight bust sizes could be tabulated for boys 50-57 cms) and nine for girls (48-56 cm). Height and weight measurements

in relation to bust size were tabulated separately. The standardised body measurements for selected women's wear and for preschoolers are presented in Chapter IV.

2. Developing patterns for sizes formulated and evaluation of the standardised measurements

The procedure for the above included the following steps:

a. Developing patterns for choli and evaluation of the same

b. Designing patterns for petticoats and evaluation of the same

c. Developing dress designs for preschoolers and evaluation of the standard body measurements

d. Adaptation of standard body measurements to different types of dresses for preschoolers

a. Developing patterns for choli and evaluation of the same

The measurements taken under the different bust groups were standardised and sizes were formulated in the following steps:

i. Developing a sample pattern

ii. Developing patterns for sizes formulated from standardised body measurements

iii. Constructing a muslin pattern for each size and

iv. Evaluation of the developed patterns under each size for fitting, comfort and general appearance

i. Developing a sample pattern

Individual figures differ much and no two figures are alike for the same size. Since drafting is the only method suitable even for figures with some of regularities, the investigator adopted this method to frame the patterns. For drafting the choli design, Juvekar and Juvekar's (1956) method was followed as the instructions were simple, the drafting procedure clear, and alterations were easy to make.

A sample pattern was developed for one bust size using the above method and the pattern was altered to meet the choli requirements. This sample pattern was cut out and using this, a muslin pattern was constructed and tested for fitness. Based on the responses of the wearer, the investigator made alterations in the sleeve cap line. The wearer was satisfied in all other aspects of fitting such as position of the darts, side seams, shoulder width, full length and comfort.

ii. Developing patterns for the sizes formulated from standardised body measurements

Patterns were developed for different bust sizes from standardised body measurements. For drafting the choli design, Juvekar's (1956) method was adopted, as this method gave satisfactory results on the test pattern. The pattern was further altered to meet the choli requirements and also to obtain a good fit for the figure.

iii. Constructing a muslin pattern for each size

Muslin was chosen for constructing the basic garment slopers because Strickland (1956) states that it will eliminate any mistakes in the constructing the process. Five muslin choli patterns were constructed for the five different bust sizes. Since plain seam is the best seam for making the blouse these were used, while making the muslin cholis. The sample draft of choli is given in AppendixVII.

iv. Evaluation of the developed patterns

For evaluation 10 students, coming under each bust size, were selected. They were made to wear the constructed choli for evaluating such aspects as, ease, fitting, and comfort as per rating scale given in Appendix VIII. The investigator noted the alterations as suggested by the candidates.

b. Designing patterns for petticoats using standardised measurements

Since the majority of the young women came under the category of 95 cm (38") and 100 cm (40") the above two sizes were taken as the standard for developing paper patterns for petticoats. Before designing the paper patterns, consumer preferences and the preferences of girls of sewing class regarding four gore and six gore petticoats were ascertained and this showed that only six gore petticoat was preferred

by consumers. Hence the pattern for this type of skirt was developed after reviewing the works of Kumar (1962) and Doongaji and Deshpande (—). These were modified and a suitable pattern was evolved by the investigator. The draft thus prepared is given in Appendix IX.

b. Construction of petticoats and evaluation of the same

The material selected for constructing the petticoat was poplin since the results of the survey regarding consumer preferences revealed that all preferred and used poplin petticoats. The petticoats were constructed and given for evaluation to ten candidates. Various aspects such as fit, comfort, drape and construction aspects were evaluated by means of a rating scale which is presented in Appendix X.

c. Developing dress designs for pre-schoolers and evaluation of the standard body measurements

Apart from the studies already conducted on consumers of different income levels and educated mothers in regard to preschoolers' clothing, this step included the conduct of surveys on selected tailors and shopkeepers and also the observation of children in the nursery for the costumes worn by them. The findings of these studies enabled the investigator to select the most popular garments for developing dress designs with a view to evaluate the measurements standardised by her for preschoolers of 3-5 years.

1. Survey on tailors

Ten professional tailors who were in the process of making children's dresses from different areas of Coimbatore city were selected to collect information on certain aspects of preschoolers' garments. An interview schedule with ten essential questions was used. Such details as types of garments mostly stitched for preschoolers, sources of obtaining design ideas, methods adopted for stitching, self help features introduced by them in dresses constructed by them were collected. The schedule is presented in Appendix XI.

Tailors made full shirts, bush shirts, half pants and baba suits and bell bottoms for boys. All of them constructed frocks and pantees, and the majority stated they made maxis, skirts and blouses for girls. The tailors mostly obtained design ideas from customers; they also imitated readymade garments, pattern books, magazines, movies and their own originality were the other sources for ideas for designs.

The tailors stated they either took the measurements of children for the required garments or used model garments given by customers. Specially for baba suits and frocks patterns books also were referred to. This shows commercial patterns were not adopted by any of the tailors and this can be attributed to the non-availability of such patterns in India. Different types of self help features were introduced by tailors in preschoolers' garments such as buttons, front openings and pockets.

ii. Results of the shopping survey

Ten shops which made sales on readymade garments were selected in different areas of Coimbatore, so as to collect information regarding the available readymade garments and the mostly sold garments for preschool boys and girls. A proforma was formulated to elicit this data from shopkeepers and this is presented in Appendix XII.

In all the ten shops, frocks, bush shirts, half pants and baba suits were available. Maxis were available in nine shops. Banians, full shirts, bell bottom and tops were available in 6-7 shops and few shops had skirts and blouses. The mostly sold garments happened to be frocks, followed by maxis, bush shirts, half pants and babe suits.

The garments were of different price ranges depending on the quality of fabrics, sizes, trimmings and decorations present. Prints, floral design, dots and stripes, birds and human figures were common in frocks. Decorative fasteners, embroidery as smocking, applique work, pockets, designs created by laces, gathers, pleats, and tucks were common in frocks and baba suits. Pockets and fasteners formed the decorative features in bush shirts and half pants. In some cases embroidered bush shirts were also available. The fabric varieties available in the shops for the garments are shown in Appendix XIII.

Poplin seemed to be the most common fabric for most of the garments except half pant. Next ranked terycot and polyester fabrics, followed by two by two and cambric. Shirts were available in poplin, terycot and polyester fabrics. Drill, terycot and stretchlan were the common fabrics for half pant. Frocks were available in all types of smooth textured fabrics, such as poplin, two by two, cambric, terycot and polyester.

iii. Observation of children in the nursery school

A group of 50 preschool boys and girls from the nursery school in Sri Avinashilingam Home Science College campus was selected for the purpose of observation of costumes. The observation was done for seven days with a schedule outlined for children's costume. The schedule for collection of data is presented in Appendix XIV. The results were recorded and they are depicted in Appendices XV-A and XV-B respectively.

More than 70 per cent of the girls were frocks and very few wore other garments such as maxis, different types of skirts or blouses. The majority of the boys wear full or half shirts with half pant and few, full pants. From the findings of the homemakers' survey it was evident that all mothers preferred frocks for their preschool girls and around 45 per cent, the other garments. More than 90 per cent preferred bush shirts and half pants for their preschool boys.

From the shopping survey it was clear that frocks for girls and bush shirts and half pants for boys were available in all shops and these were the garments mostly preferred and purchased by consumders.

From the interview conducted on tailors, it was evident that the most common items stitched by them as per the orders of customers happened to be frocks for girls, bush shirts, half pants and full shirts for boys.

The results of the observation of the 50 preschool girls for a week revealed that almost all the girls wore frocks as the most common costume, and the boys, bush shirts and half pants.

Hence frocks, shirts and half pants proved to be the main items of garments that have a great potential to be produced as readymade items for marketing purposes and consumers purchased these items mostly as readymade for this age group. The standardised body measurements for pre-schoolers can be utilised not only for the above items most commonly used but also for creating and developing a variety of designs in dresses and styles.

iv. Selection of costume

The most suitable garments for the preschool girls being the frock, and for the preschool boys, the bush shirts and half pant, these garments were selected for further research work.

v. Designing the basic slopes

For designing the basic slopes the method selected was drafting, since any garment can be made by the drafting method. Moreover drafting is the best method of studying patterns as it gives the knowledge of the shape of patterns, the changes in shape that are needed to produce different effects. It is an economical and less tedious method. Since the basic requirements for drafting happen to be accurate measurements, the formulated standard body measurements of preschoolers were utilised. The investigator also felt it was a means of checking the accuracy and adaptability of the standard measurements. Hence these were used for preparing the patterns using the drafting method and then to construct the garments.

A literature review was done, for designing the basic slopes for the selected dresses of little girls and boys and these were available from the works of Juvekar (1958), Kumar (1962), Bakshi (1958), Pandit (1967) and Doongaji and Deshpande (—). The drafts for bodice and sleeve blocks for frocks and also for shirt and shorts are provided in Appendices XVI, XVII and XVIII respectively.

To achieve good fitting the selected garments (frock, bush shirt and half pant) were made on muslin cloth. Ten preschool girls and ten preschool boys with average body measurements were selected from the college nursery school

to conduct fitting trials and the children were made to wear the muslin garments.

For correct size, becomingness and proper fitting it was very essential to conduct these trials. The instructions for drafting patterns were then modified suitably, and utilised.

vi. Developing dress designs for preschoolers

Designs were outlined keeping in view the findings of the surveys conducted on mothers of preschoolers, opinions of shop keepers and tailors and observations made in the nursery school. The investigator added her own ideas and thoughts to the above. From the basic slopers made, the designs were developed for the selected garments.

Dresses for girls

Two designs for frocks were formulated keeping in view consumer preferences and problems.

In the selection of colours and fabric designs the views of consumers were taken into consideration and accordingly deep colours as red and green, floral designs with plain, gingham with plain fabrics were selected.

In regard to readymade dresses many problems were faced by mothers particularly in trimmings and decorations. The main problems were due to laces (50%), embroidery and painting (40%), smocking (35%), beads (40%) and hence it

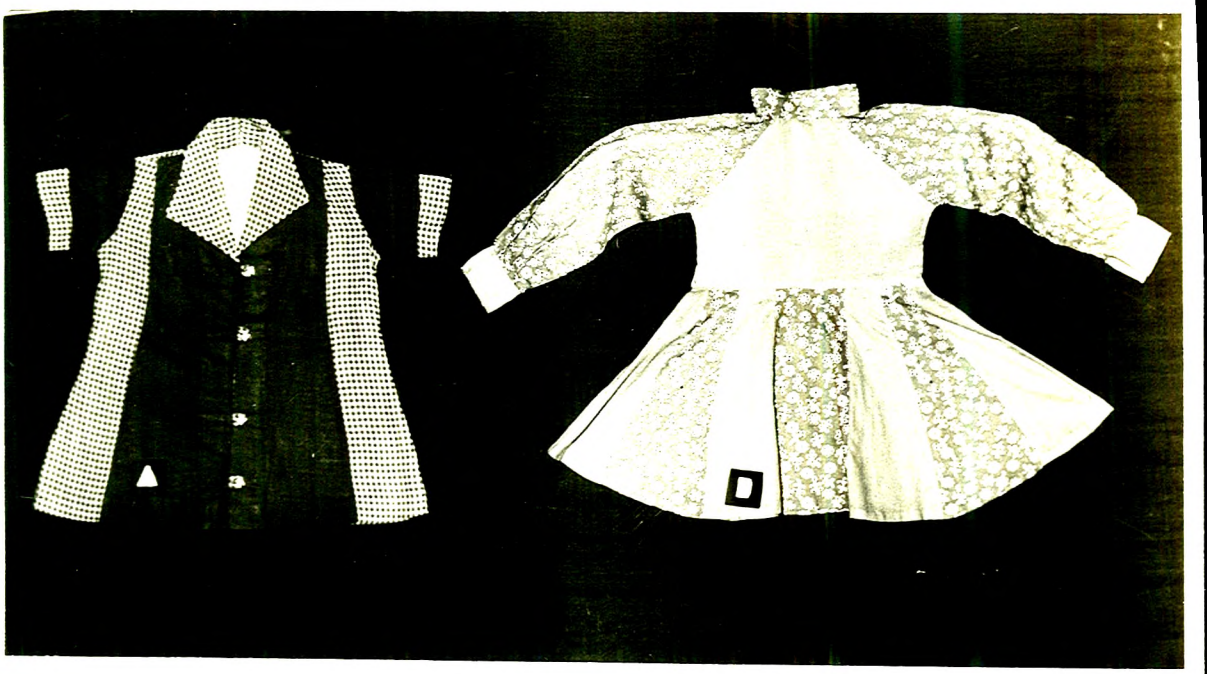
was decided not to have the above for the selected frock designs. Since the front opening enables the child to wear and remove the garment herself this self help feature was introduced in the garment and buttons and loops formed the fasteners.

The first frock was of the A line type with plain and check combination. It had shawl collar and plain sleeves and front opening which formed the self help feature. Fabric loops and fancy buttons formed the fasteners.

The design selected for second frock had plain and printed combination with turtle neck collar, raglan sleeves and plain cuffs. The skirt was circular, with ten panels, five in front and five in back, with a centre big panel and one plain and one printed panel on either side. Since back opening was preferred by more than 85 per cent of the mothers this was incorporated in this frock. Press buttons were used as fasteners since they preferred the same. (Plate IV).

Selection of fabrics

The fabrics selected for making the frock was cotton as from the survey results it was clear that cotton materials were preferred. The homemakers preferred two by two, poplin and cambric for frocks. According to salesmen of readymade garment shops the mostly sold frocks were in the above types



TWO FROCK DESIGNS SELECTED FOR PRESCHOOL GIRLS

PLATE. IV

of fabrics only, and most of the orders as received by tailors from customers to make frocks were also in two by two, poplin and cambric materials. As more than 60 per cent of the home makers preferred fine and medium textured materials these were selected for stitching the frocks, since two by two, poplin and cambric varieties satisfied all these requirements these were selected for making the dresses.

Dresses for boys

Two sets of garments were made and for these two different designs were selected. For the first set, in the bust shirt yoke was incorporated in front with plain material. For half pants the plain material was used for sides, bottom and for band. For the second set of garments, the bush shirt had shawl collar, and the half pant had patch pockets, the combination was white with printed material (Plate V).

Selection of fabrics

In readymade stores bush shirts and half pants were available in different types of fabrics, colours, textures and design combinations. The information given by consumers, and salesmen revealed that poplin and terycot were preferred mostly for bush shirt and drill and terycot for half pants. Mothers revealed their choice towards fine and medium textures and hence the above fabrics were selected for the boys' garments. Surveys on consumers and educated mothers

TWO SETS OF BUSH SHIRTS AND HALF PANTS SELECTED FOR PRESCHOOL BOYS

PLATE. V

revealed that the majority of them preferred pockets and decorative fasteners for both the garments and few preferred tucks, embroidery, including applique work for bush shirts.

The shopping survey revealed that most of the trimmings and decorations used for bush shirts were pockets. Tucks embroidery including applique and decorative fasteners were used for both the garments. According to tailors pockets and decorative fasteners were incorporated as self help features in childrens' garments. Based on the above findings pockets and decorative fasteners were incorporated by the investigator in the selected garments.

vii. Evaluation of garments

For evaluating the constructed garments rating scales were framed and these are given in Appendix XIX. These consisted of such details as general appearance, construction, comfort and fitting aspects, trimmings and decorations, designs and self help features. The rating scales were distributed to 20 teachers and mothers and 30 post graduate students for evaluating the constructed garments.

The garments were put on the children and the selected samples were requested to come to the nursery to do the evaluation. The data obtained were collected, analysed and interpreted.

d. Adaptation of standard body measurements to different types of dresses for preschoolers

The feasibility of the adaptation of the standard body measurements for different types of dresses for preschoolers was also attempted.

Patterns for the following items of apparel were formulated and dresses for boys and girls were constructed (Plate VI).

1. Girls' A line dress and pantes
2. Girls' maxi wear
3. Girls' traditional skrt and blouse
4. Boys slack and knickers
5. Boy's full shirt and half pant
6. Boys' pyjamas and kurta

The constructed dresses were put on selected children and they were evaluated mainly for size and fit apart from dress design and attractiveness (Plate VII).

A LAY OUT OF DRESSES FOR PRE SCHOOLERS DESIGNED AND MADE OUT OF STANDARD BODY MEASUREMENTS

PLATE. VI

PRESCHOOL CHILDREN IN OUTFITS MADE OUT OF STANDARDISED BO
MEASUREMENTS

PLATE.VI

C. Organising a garment unit for rural young women

The following aspects were covered in organising a garment unit for rural young women.

1. Selection of the place
2. Selection of the sample
3. Setting up the garment unit
4. Planning the educational programme and
5. Conducting the training programme

1. Selection of the place

The place selected for organising the tailoring unit was the village of Kooranoor in Seeliyur Panchayat of Kamamadai Block, Coimbatore District. The site was at the Krishi Vigyan Kendra of Vivekanandapuram at a distance of 44 kilometres from Coimbatore city. Kooranur is one of the 18 villages selected for the IRD Programme. Since one of the major objectives of the research was to train rural young women in the vocation of dress making, and provide employment opportunities to them this interior area was selected where the women could be motivated for maximum cooperation in rural development programmes. As a preliminary step, the investigator made an effort to study rural characteristics by the conduct of a survey among the rural households to learn their family background, clothing practices, problems and requirements.

a. Study of rural characteristics

A survey was conducted at Karamadai Block at Coimbatore district in selected villages which included Vivekanandapuram, Devanapuram, Thekkampatti, Vijayanagaram, Salaiyur, Sujanganoor, Dhayanoor, Seeliyur, Tholampalayam, Velliangadu, Pudur, Medur, Kendayapalayam. The above villages had already been selected for IRD Programme. Easy accessibility to the investigator and cooperation extended by the villagers were the main reasons for the selection of the above mentioned villages.

Selection of the sample

Two hundred and fifty rural families were selected as samples for the study from the above villages with the representation of 20 per cent of the population at random from each village.

Selection of the method

The interview method was selected by the investigator as it helps to clarify all doubts and elicit accurate information. A detailed interview schedule was formulated which included such aspects as family background, the expenditure pattern of rural families, clothing selection and purchasing habits and their problems. The schedule after pretesting on 50 families for reliability was modified and it is presented in Appendix XX.

Conduct of the field investigation

Using the schedule, personal interviews were conducted in the homes after establishing rapport with the informants. The families were categorised as low, middle and high income on monthly per capita income basis (Government of India, 1981). Such classification showed that 74 per cent were in the low, 18 per cent in middle and 8 per cent in high income groups respectively. The collected data were consolidated and analysed. The major findings are presented in Appendix XXI.

To sum up the rural families are characterised with a very low income with agriculture as the main occupation. The basic necessities of life forced them to spend a large amount on food, and a meagre sum on clothing. A large family size, traditional habits and customs, a low literacy level, lack of interest in clothing, lack of facilities, interest and time to participate in educational programmes proved to be the real handicaps.

Rural families are more concerned about price and quality in fabrics along with serviceability. Hence for clothing the masses of India, attractive serviceable low priced textile goods including readymades should be made available. There is a dire need for increasing the family income and educational status. If economic benefits could be achieved by income earning occupations their standard of living can be raised and there would be a change in their mental

outlook also as nothing can make them happier than the eradication of poverty. Majority of the families had no subsidiary occupations.

There is a great scope in the rural area, for promoting income generating activities. The above induced the investigator to take steps to establish a garment unit with a view to mobilise rural young women and train them in dress making. It was hoped the training would impart the required skills in them and enable them to produce garments which in turn might help them to become self-employed and earn an income also that might raise their living standards.

2. Selection of the sample

From the surrounding villages of Vivekanandapuram rural young girls between the age group of 15 to 22 years were mobilised and motivated to join the sewing programme. Their family background revealed they hailed from the low income group. Ten young girls, who were in their homes, after completing their studies from eighth standard to S.S.L.C. without any jobs, joined the programme and they showed a keen interest in learning tailoring. Since the candidates were ready, steps were undertaken to establish the garment unit.

3. Setting up the garment unit

At Vivekanandapuram, a small place which could accomodate five sewing machines was made available for

setting up the unit. It had a carpet area of 12 sq.metres.

The minimum equipment required for the tailoring unit were outlined. These included such non-consumable items as the sewing machines, shears, an electric iron and other related items needed for garment making and also certain consumable items as fabrics, needles, threads and fasteners. The list of items and the total amount required for a tailoring unit are given in Appendix XXII. The major items as the sewing machines, furniture required were collected on loan basis from the college. A few essential non consumable items and most of the consumable items were purchased by the investigator. To enable the investigator to do the above, an advance amount of Rs.1500/- was granted by the authorities and this was made use of for the purchases, which later on was returned.

During December 1978, the tailoring unit was established at Vivekanandapuram. A technically qualified instructress was appointed for the purpose. The investigator gave instructions to the instructress as regards the implementation of the training programme and supervised the work every week.

4. Planning the educational programme

This included the framing of the following objectives:

a. To develop knowledge and skill in tailoring techniques in rural young women

b. To train them up for a vocation and enable them to earn an income by self employment

In January 1, 1979, the actual training programme was started with ten candidates (Plate VIII). The teaching programme was conducted for 30 hours per week. The training programme was conducted from January to June for six months. The course contents were outlined to suit the requirements of the candidates. A syllabus in garment making was framed which included basic sewing techniques and lessons on making selected garments. The formulated curriculum is given in Appendix XXIII.

5. Conducting the training programme

Since the trainees had no knowledge in tailoring, the course was started with lessons in the operation of sewing machine and in basic sewing techniques. At the outset simple garments such as the jablas, knickers, panties, garments and furnishing items which involved straight stitching were taught. Gradually, other garments such as cholis, frocks, boy's shirt, and shorts were introduced in the training programme. Even though quite a few garments were taught, the candidates were made to undergo adequate training in making selected garments such as the sari petticoat, cholis, frocks, boys' shorts and furnishing items.

THE TAILORING UNIT IN ACTION IN THE RURAL SET UP AT VIVEKANANDAPURAM

PLATE.

For developing the needed skills, in making these garments as per the required standards, for production purposes, special efforts were undertaken, by adopting the repetition process in teaching on the part of the instructress and in learning on the part of the candidates which gave them adequate confidence also in the job for which they were trained. The demonstration method was selected by the investigator for teaching since it is applicable in this area and is simple to understand. Moreover the demonstration provides the candidates an opportunity to see what exactly is done. Where students have to learn skills and carry out certain activities in a scientific and efficient manner, demonstrations prove to be very helpful. Considering the relative merits this method was selected for teaching the candidates.

a. Maintenance of records

Good record keeping is a fundamental requirement for the collection of scientific data. Therefore to obtain accurate details the following records were maintained during the training period.

i. Attendance records

Records for attendance were maintained for the candidates and for the instructress with a view to assess the regularity of candidates in the educational programme.

ii. Stock records

Separate records were kept for consumable items such as fabrics, paper, thread etc. and for non-consumable items such as shears, bobbin cases, metre scales and other items.

iii. Contingency register

A record was maintained for all the expenditure incurred for different items, both consumable and non-consumable, classified under different heads.

iv. Lesson plans

The instructress was asked to follow the framed curriculum, and make suitable lesson plans, in advance, and show the investigator.

v. Assessment of candidates

The record for assessment of candidates from time to time in their progress was maintained.

The above records enabled the investigator to collect scientific information in regard to the vocational training programme.

D. Evaluating the garment unit with reference to the training and production aspects

The aspect included the following procedures.

1. Evaluation of the training programme
2. The production programme
3. Maintenance of records
4. Evaluation of the production unit
5. Evaluation of petticoats

1. Evaluation of the training programme

Evaluation procedures are used continually in the systematic approach to education. (Brown et al., 1977). The evaluation phase of the study is the time for students to take stock, to see what they have learned or to understand how they have changed as the results of the study. Considering the importance of evaluation in extention education programmes, the following procedures were adopted.

a. Evaluation of the finished garments

A proforma was prepared by the investigator to evaluate the finished garments by ten judges who had good knowledge in clothing construction. The proforma consisted of such details as general appearance, construction aspects such as seam, hem, band and placket and it was suitably designed to evaluate the candidates' performance so far as the preliminary garments, petticoats and blouses were concerned. The proforma is given in Appendix XXIV. The finished garments

were shown to ten judges after one month's training, and again after four months' training the progress made by the candidates was ascertained.

b. Self assessment of candidates

A rating scale was prepared by the investigator to evaluate the interest, knowledge and skill of the students. The rating scale is given in Appendix XXV and the results are presented in Chapter IV, Results and Discussion.

2. The production programme

Collection of orders

In July 1979, the production of garments was commenced by which time the candidates had completed six months training, and had become confident enough to accept orders and produce women's and children's wear. Efforts were undertaken by the investigator to canvas orders from different sources, such as Khadi and Village Industries Commission (KVIC), National Textile Corporation (NTC), Schools, hospitals and nurseries. Out of these the NTC agreed to give their seconds' materials and cut pieces for making petticoats and frocks, considering the fact that it was an income generating programme in a rural area. Suitable fabrics for the above readymade garments were selected and brought to the institution.

Within a short period, the trainees were expected to produce quite a few garments. Hence the trainees were bought to the campus and they were provided with the sewing machines of the institution and technical guidance to meet the urgent requirements of the NTC. This proved to be a real working experience for the trainees. (Plates IX and X). On completetion of the undertaken work the candidates returned to Vivekanandapuram with greater confidence and changed outlook. From time to time consignments of seconds materials were provided by NTC for making petticoats. These were sent to the tailoring unit at Vivekanandapuram. As regards the construction procedures, sizes required, and style matters, instructions were given and the garments were made at the workspot.

The work in the tailoring unit was conducted on a cooperative basis. The processes included cutting the pieces, assembling, stitching and completing the garments. The fabrics were cut for the gored skirts for different sizes in a massive scale by using standard blocks. Depending on their experience and confidence the trainees did either straight stitching or constructed the bottom frill and waist band. On completion the garments were sealed and pressed and they were returned to the institute. These were checked for quality and standards and despatched to the marketing section of NTC. (Plate XI). This formed a regular feature of the tailoring unit and the charges for making the garments were paid to the institute by NTC.

DRESSES EASY TO PUT ON EASY TO TAKE OFF - STITCHED BY TRAINEES

PLATE. X

TRAINEES AT THE CAMPUS MAKING GARMENTS

PLATE. IX

PETTICOATS READY TO BE DESPATCHED TO NTC

PLATE. XI

Besides the above, local orders from the surrounding villages were accepted and done. Also the orders that could be mobilised from the campus were passed on to the tailoring unit. To feed the tailoring unit during the slack period fabrics such as poplin, cambric, longcloth and khadi chints and plain varieties were purchased and sent for making different types of garments, particularly frocks and petticoats. A set of designed frocks for preschool girls and dresses with self help features made by the trainees are shown in Plates XXI and XIII.

A SET OF DESIGNED FROCKS FOR PRESCHOOL GIRLS

PLATE. XII

3. Maintenance of records

The following records were kept for the production programme.

i. Attendance record for trainees

These were essential because the candidates were paid on piece rate basis.

ii. Stock register

For both consumable and non consumable items the stock registers were kept.

iii. Contingency register

For the expenditure incurred for different items purchased under recurring and non recurring heads, a register was maintained.

iv. Record for orders placed

For the material sent by NTC and orders placed a record was kept. Also records were kept for the orders canvassed from other sources.

v. Record for garments produced

For all items of garments produced, records were maintained for individual candidate and for the total number of different types of garments produced per month by the tailoring unit.

vi. Record for wages paid to candidates

Since the candidates had to be paid for the garments produced by them a record for wages paid to each candidate per week was maintained.

vii. Record for sale of garments

For whatever materials purchased and garments made by investing a capital sum, a seperate record was maintained for the sale of garments with selling price specified.

4. Evaluation of the production unit

From the above records, the investigator could make an assessment of the following:

a. the number and types of items produced by the tailoring unit within a specified period

b. the amount earned by the candidates on an average per month

c. monetary benefits, if any, by running the tailoring unit

5. Evaluation of petticoats

Considering the fact that petticoats formed the major items of production and the above were sold mostly by NTC in order to learn consumer reactions a questionnaire (Appendix XXVI) was formulated to elicit information from consumers of petticoats produced by the tailoring unit. This included such aspects as sizes mostly found suitable

for consumers, frequency of purchases made, fabrics and types of petticoats preferred by them, price ranges preferred by them, problems faced in the use and maintenance of these petticoats, their satisfactions and dissatisfactions and suggestions if any for improving the same. The answers were collected, consolidated, analysed and the findings are presented in the next chapter. It was hoped this information would be beneficial not only to the marketing section of NTC but also to the organisers of the production unit.

Results and Discussions

IV RESULTS AND DISCUSSIONS

The results of the study are presented under the following major heads:

A. Consumer preferences and problems in clothing selection

B. Evaluation of the standardised body measurements

C. Assessment of the training programme and

D. Evaluation of the production aspects

A. Consumer preferences and problems in clothing selection

The preferences and problems of consumers with regard to clothing selection as revealed by this survey are presented under the following headings:

1. Consumers' views on selected women's garments
2. Consumers' views on preschoolers' clothing and
3. Views of educated mothers on preschoolers' wear

1. Consumers' views on selected women's garments

The consumers' views with regard to selected women's garments are discussed under the following heads:

a. Purchasing habits of consumers

b. Details of tailor made garments and problems faced

c. Details of readymade garments and problems faced and

d. Suggestions for improving the ready to wear garments

a. Purchasing habits of consumers

The purchasing habits of the consumers surveyed are given in Table I.

TABLE I

PURCHASING HABITS OF THE CONSUMERS SURVEYED

S.No.	Type of purchase	Total No. (200) Percentage of consumers answering	
		Petticoat	Choli
1.	Ready garment	50	..
2.	Tailormade	20	72
3.	Tailormade and readymade	15	8
4.	Readymade and Homemade	9	1
5.	Homemade	5	4
6.	Tailormade, Homemade and readymade	1	1
7.	Tailormade and Homemade	..	14

Fifty per cent of the consumers purchased purely readymade petticoats. Alongwith readymade petticoats, tailormade and homemade petticoats were used by 25 per cent of the consumers. Twenty per cent of the consumers purchased purely tailormade petticoats whereas five per cent of

the consumers used purely homemade petticoats.

As regards Cholis, a large majority namely 72 per cent of the consumers purchased only tailormade cholis. Alongwith tailormade cholis, 24 per cent resorted to readymade and homemade cholis and four per cent used purely homemade cholis. Thus readymade petticoats were popular among the consumers while tailormade cholis were more popular than readymade.

b. Details of tailormade garments and problems faced

i. Giving models and body measurements

Among the 36 per cent of consumers who gave the petticoats to the tailors, 25 per cent gave models for stitching. In a few cases along with model garments, body measurements were also given. On the other hand all the 95 per cent of the consumers who resorted to tailormade cholis gave model cholis; only six per cent gave body measurements. Thus it appears that giving body measurements to the tailor for making cholis was not in practice among most of the consumers.

ii. Amount of material purchased

Among the 72 members who gave petticoats to the tailors 50 responded and among 190 members who gave cholis to the tailors 100 responded.

Fiftytwo per cent of the consumers gave two meters of fabric to the tailor, the width of material being 90 cms, and 20 per cent gave 2½ meters. Sixteen per cent gave one and a half meters of 125 cm wide material. This shows the standard length of fabric required for a petticoat is two meters of 90 cm width as stated by the majority.

For cholis 40 per cent purchased 70 cm, 27 per cent 65 cm and 20 per cent 60 cm respectively, the width of material being 90 cm. Hence 65-70 cm of 90 cm width can be considered as the standard length of fabric required for the garment. This is found to be in agreement with cut pieces available in cloth shops which happen to be generally 70 cm for ordinary use.

iii. Making charges

The making charges paid by consumers for petticoats and cholis varied, depending on the tailors and types of fabrics given. For yoke or cut cholis Rs.3-4/piece, were paid by the majority of consumers, Rs.2½-3 for frilled petticoats, and Rs.2-2½ for plain petticoats.

iv. Fabric preferences

Tailormade and homemade garments were used by 100 consumers. Their fabric preferences for these two garments were different altogether. While a majority preferred poplin and longcloth for petticoats, two by two and cambric were

preferred for cholis by 60 per cent. Two/one, polyester, silk and terycot were the other fabrics, preferred and purchased for cholis by 40 per cent of the consumers.

v. Problems encountered in tailormade petticoats

The main problems faced by consumers in using tailormade petticoats and blouses were: improper stitching, heavy making charges, improper fitting and cutting particularly in cholis.

vi. Suggestions given for overcoming problems

The suggestions given by the consumers for improving tailormade garments were: inserting strong stitches, proper cutting of the material, reducing the making charges and taking proper body measurements.

C. Details of readymade garments and problems faced by consumers

i. Sizes purchased

Seventyfive per cent of the consumers purchased readymade petticoats. The most common sizes of petticoats as purchased by them happened to be 100 cm and 95 cm length respectively by 55 per cent and 20 per cent of the consumers. Very few purchased any readymade cholis.

ii. Type of petticoat preferred

The type of petticoat preferred by consumers was six gore petticoat since 90 per cent used only six gore petticoat. Among these 70 per cent used petticoats with single frill. The next preference was given to lace attached petticoats by 30 per cent and around 10 per cent preferred embroidered petticoats.

iii. Type of choli preferred

Cut blouses were used by 98 per cent of the consumers. In every cut blouse yoke was attached. Round neck and short sleeves were preferred by 70 per cent and 30 per cent preferred boat necks.

iv. Fabric preferences

While medium textured materials were preferred by 95 per cent of the consumers for petticoats, 91 per cent preferred a soft textured fabric for cholis. For petticoats poplin and long cloth were the fabrics preferred by consumers. Those few who purchased readymade cholis preferred knits.

v. Problems faced in purchasing readymade petticoats

The main problems faced by consumers in using readymade petticoats were improper and poor stitching, as stated by 50 per cent. The other problems were the fading of colour in both the garments, and improper fitting, particularly in cholis.

d. Suggestions for improving the ready to wear garments

The suggestions for improving the readymade petticoats as given by 50 per cent of the consumers included improving the stitching aspects, selecting serviceable fabrics for apparel items without increasing the cost and also to make them available in proper sizes as per requirements.

2. Consumers' views on preschoolers' clothing

The results of the survey conducted on consumers belonging to different income groups on their preferences and problems with regard to preschoolers' clothing are classified under the following heads:

a. Family income and clothing expenditure
b. Educational and occupational status
c. Clothing purchasing habits
   i. Frequency of purchase
   ii. Place of purchase
   iii. Who selects clothing
   iv. Sources of information
   v. Factors influencing clothing choice
d. Clothing preferences and problems
   i. Consumer preferences of clothing fabrics
   ii. Colour, design and texture preferences
   iii. Trimmings and decorations
   iv. Plackets and fastenders.

v. Clothing types preferred and reasons for such preference

vi. Problems faced in clothing types

vii. Suggestions for improvement

viii. Factors influencing children in their clothing selection as perceived by consumers

a. Family income and clothing expenditure

The details regarding family income and clothing expenditure are presented in Appendix XXVII-A to I for low, middle and high income families.

1. Low income

Out of the 75 low income families 27 (36%) spent Rs. 150-250 and 22 (29%) Rs.250-300 on clothing annually. The amount spent varied in the rest of the families. The correlation coefficient showed that there was a positive correlation (0.55) between family income and clothing expenditure (Appendix A).

Forty five families (60%) spent within Rs.50 for preschoolers' clothing from amount alloted for family clothing and 24 (32%) spent Rs.50-100 for the same purpose. The correlation coefficient showed that a positive correlation (0.48) existed between family clothing expenditure and preschoolers' clothing expenditure (Appendix B).

The amount expended on preschoolers' clothing from annual income shows that 34 families (45%) spent Rs.50-100 , 18 families (24%) Rs.100-150 and 17 families (23%) spent within Rs.50 respectively. The statistical analysis revealed there was a positive correlation (0.35) between the two (Appendix C).

ii. Middle income

Out of the 60 middle income families, 21 (35%) spent Rs.400-500 annually for clothing and 16 (27%) spent Rs. 250-400 . The rest spent varied amounts. The correlation coefficient revealed that there was a positive correlation (0.45) between family income and clothing expenditure (Appendix D).

From the money alloted for family clothing most of the middle income families that is 37 (62%) spent Rs.50-100 and 8 families (13%) Rs.100-150 and another 8 families (13%) Rs.150-200 on preschoolers' clothing.

The statistical analysis revealed that a positive correlation of (0.65) existed between family clothing expenditure and preschoolers' clothing expenditure (Appendix E).

The amount expended on preschoolers' clothing from the annual income revealed that 20 families (33%) spent Rs.100-150, 19 families (32%) within Rs.50 and nine families (15%) Rs.200-250 annually. The statistical analysis revealed there was a positive correlation of 0.27 between family income and preschoolers' clothing expenditure (Appendix F).

iii. High income

The high income families formed 165 in total, out of whom 83 (50%) spent Rs.500-750 and 46 (28%) Rs.750-1000 annually for clothing from their family income. Fifteen families (9%) spent Rs.1250-1500 and the amount spent by the rest varied. Between the amount spent on clothing and the annual income a positive correlation of 0.33 existed (Appendix G).

The relationship between family clothing and preschoolers' clothing expenditure revealed that 85 families (52%) spent Rs.100-200 and 43 families (26%) Rs.200-300 respectively annually. Fifteen families (9%) spent Rs.400-500 and the rest spent different amounts. The statistical analysis revealed there existed a positive correlation (0.57) between family clothing and preschoolers' clothing expenditure (Appendix H).

The amount spent on preschoolers' clothing from family income revealed that 55 families (33%) spent Rs.200-300, 50 families (30%) Rs.100-200, and 28 families (17%) spent Rs.400-500 respectively. The rest spent different amounts. The statistical analysis revealed that there was a positive correlation of 0.57 between the two (Appendix I).

b. Educational and occupational status

i. Educational status

The members in the samples surveyed were educated but there were differences in levels of education. In the low income group, 45 and 35 per cent had studied up to middle and primary school level respectively and the rest had studied upto S.S.L.C.

In the middle income group, 25 per cent had studied upto high school, 35 per cent were graduates and the rest post-graduates.

In the high income group, 40 per cent were graduates, 25 per cent post graduates and the rest had studied upto S.S.L.C.

ii. Occupational status

Thirty five, 20 and 45 per cent of the sample in the low, middle and high income groups were housewives. For 25 and 45 per cent of the sample in low and middle income groups, teaching was the occupation besides homemaking. The rest were engaged in a variety of miscellaneous jobs including clerical jobs.

c. Clothing purchasing habits

The clothing purchasing habits of the sample are discussed in the following sequence:

i. Frequency of purchase
ii. Place of purchase
iii. Who selects clothing
iv. Sources of information
v. Factors influencing clothing selection

i. Frequency of purchase

Preschoolers' clothing in the three income groups were mostly purchased during festive occasions such as Dipavali and Pongal, since 100 per cent of the low, 95 per cent of the middle and 88 per cent of the high income families made their purchases during festival occasions only. Very few purchased at other times.

ii. Place of purchase

Table II presents the data regarding the places where clothing purchases were done by the families surveyed.

TABLE II

PLACE OF PURCHASE OF CLOTHING BY CONSUMERS

Place of purchase	Income level			Average %
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers answering			
Shops in town	89	87	85	87
Local shops	99	88	10	66
Super market	13	32	39	28
Cooptex	15	15	6	12
Door seller	8	7	2	6

Purchases were done by more than 85 per cent of the families in low and middle income levels from the local shops and shops in the town. In high income families, 85 per cent made their purchases from shops in town, and 40 per cent from the super-market.

iii. Who selects clothing

Table III shows who selects clothing for preschoolers.

TABLE III

WHO SELECTS CLOTHING FOR PRESCHOOLERS

Person selecting	Income level			Average %
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers selecting			
Father alone	76	45	10	44
Mother alone	5	18	16	13
Both parents	20	32	77	43
Child himself	8	30	38	25

In 76 per cent in the low income families, the head of the family made the selection. In 77 per cent of the high income families both parents participated in the choice of clothing. This may be attributed to the higher income and educational levels which enabled them to allow a greater freedom to their children also in clothing choice.

iv. Sources of information

The sources of information for making clothing purchases by the consumers are given in Table IV.

TABLE IV

SOURCES OF INFORMATION FOR CLOTHING PURCHASES

Source	Income level			Average %
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers answering			
Friends, neighbours	85	73	83	80
Magazines	7	5	48	20
Exhibitions	21	10	25	19
Window displays	..	15	22	12
Fashion shows	5	12	15	11
Radio	..	..	6	5
Posters	..	..	5	5
Newspapers	..	..	5	5

Friends and neighbours proved to be the main source of information for making clothing purchases for more than 75 per cent in all the three income groups. Magazines, exhibitions and window displays were the other sources, especially for the high income families.

v. Factors influencing clothing selection

The factors which influenced the choice of clothing by the sample surveyed are presented in Table V and Fig.I.

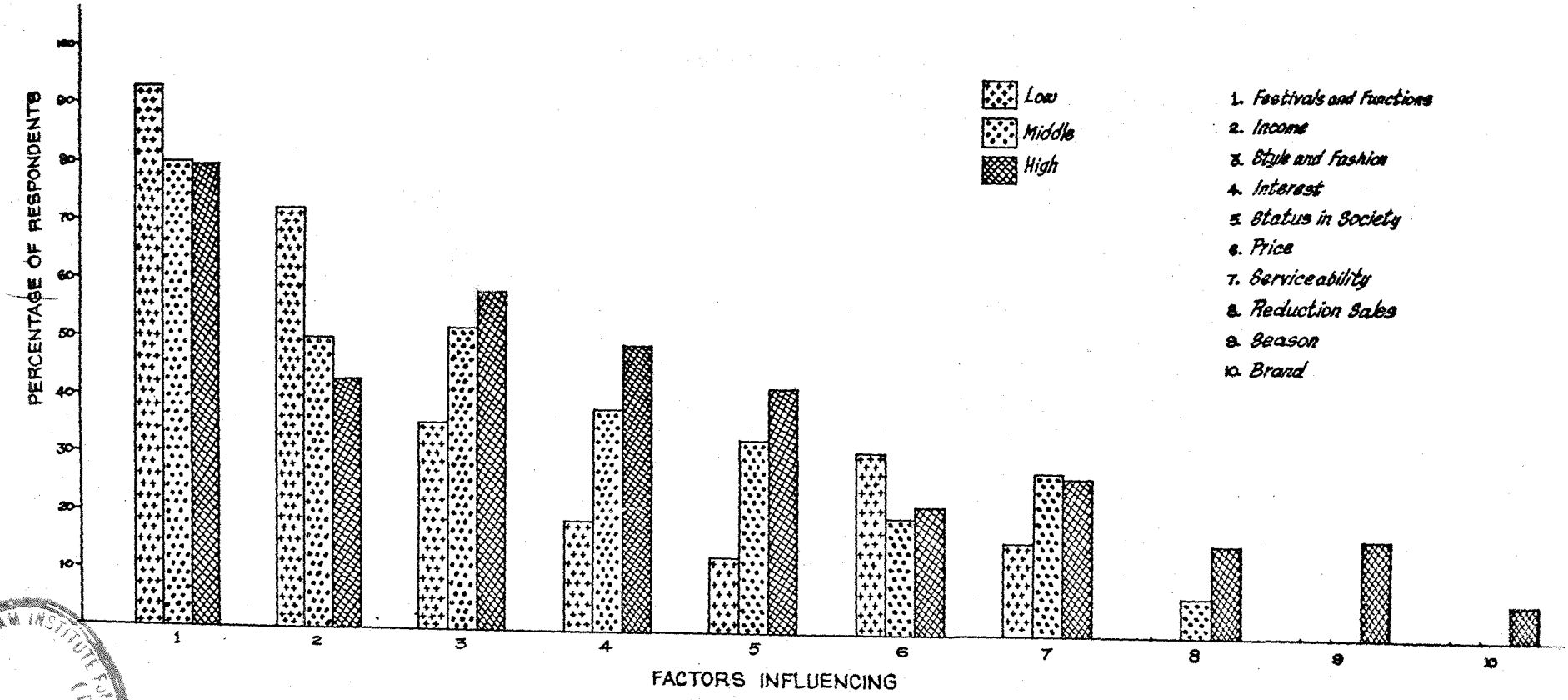
TABLE V

FACTORS INFLUENCING CHOICE OF PRESCHOOLERS CLOTHING

Factors influencing	Income level			Average %
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers answering			
Festivals and functions	93	80	79	84
Income	72	50	43	55
Style and fashion	36	52	58	49
Interest	19	38	49	35
Status in society	8	33	42	28
Price	31	20	22	24
Serviceability	16	28	27	24
Reduction sales	..	7	16	8
Season	..	..	17	6
Brand	..	..	6	2

Festivals and fumctions influenced the choice of clothing in more than 80 per cent of the families in the three income groups. Income proved to be the influencing factor in 72 per cent of the low income families, 50 per

FACTORS INFLUENCING CHOICE OF PRESCHOOLERS CLOTHING



cent of the middle income and 43 per cent of the high income families respectively.

In 58 per cent of the high income and 52 per cent of the middle income families, style and fashion also influenced the clothing choice. Interest in clothing the preschoolers influenced 50 per cent of the high income families and status in society, 42 per cent.

d. Clothing preferences and problems

1. Consumer preferences of clothing fabrics for preschoolers

The preferences of consumers of fabrics for preschoolers' wear are depicted in Table VI.

TABLE VI

CONSUMER PREFERENCES OF CLOTHING FABRICS FOR PRESCHOOLERS

Fabric type	Income level			Average %
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers prefering			
Cotton	100	97	100	99
Terycot	39	67	86	61
Cotton knit	41	37	65	48
Nylon	25	32	30	29
Terywool	4	15	20	13
Silk	1	10	14	8
Rayon	15	5	3	8
Wool	..	3	10	4

Cotton was preferred by almost all, irrespective of income. Terycot ranked second in importance. With increasing income the preference for terycot and knit fabrics was found to be greater than non blended varieties.

In low income group among the cotton varieties, poplin and cambric were preferred by more than 80 per cent of the sample. In middle and high income groups, 65 and 90 per cent respectively preferred poplin, two/two, cambric and organdy for preschoolers' wear.

As regards the reasons for such preferences more than 80 per cent in all the three income groups, expressed that cotton was suitable for preschoolers' clothing due to its reasonable price, durability, comfort and easy care properties. Easy care and crease resistant qualities were the reasons for preferring synthetics by 65 and 85 per cent of the middle and high income groups respectively, and around 40 per cent of low income group.

Colour, design and texture preferences

Design

In all the three income groups, printed fabrics were preferred to a greater extent than plain fabrics. Printed fabrics were preferred by 99 per cent of low, 88 per cent of high and 82 per cent of middle income consumers respectively. Plain fabrics were preferred by 84 per cent of high

67 per cent of middle and 60 per cent of low income consumers respectively. The combination of plain and printed fabrics were preferred by only 45 per cent of high income consumers for their preschool children.

Table VII reveals the type of designs preferred by the consumers for preschoolers' wear.

TABLE VII

DESIGN PREFERENCES FOR PRESCHOOLERS WEAR

Type of design	Income level			Average %
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers prefering			
Checks	89	73	90	84
Floral	88	70	75	78
Dots	84	62	81	76
Lines	55	65	93	71
Historic	64	57	48	56
Geometric	37	33	48	39
Abstract	36	27	45	36

Checks, floral, dots and lines were the mostly preferred textile designs by 71-84 per cent in the three income groups. Historic designs ranked next since more than 56 per cent liked the same.

Colour aspects

The colours preferred by the selected consumers for preschoolers' clothing revealed that on an average more than 60 per cent of the samples preferred, light pink, cream and blue in the three income groups. Light blue, violet, red and green were preferred by more than 50 per cent. Such combinations as pink and red, white and red, were preferred by more than 70 per cent of the consumers.

Texture preferences

The texture preferences of consumers for preschoolers clothing is shown in Table VIII.

TABLE VIII

TEXTURE PREFERENCES OF CONSUMERS FOR PRESCHOOLERS' WEAR

Texture	Income level			Average
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers preferring			%
Smooth	99	93	94	95
Medium	91	72	65	76
Shiny	51	42	15	36
Coarse	5	3	2	3

A smooth texture is preferred by more than 95 per cent of the consumers in the three income levels. Next to smooth textured, medium textured fabrics are preferred by

76 per cent on an average. A shiny texture was appreciated by 51 per cent of low income and 42 per cent of middle income consumers respectively. Evidently coarse textured fabrics were not preferred by any income level.

iii. Trimmings and decorations

The details of trimmings and decorations as preferred by consumers for preschoolers' dresses are presented in Table IX.

TABLE IX

TRIMMINGS AND DECORATIONS PREFERRED BY CONSUMERS FOR PRESCHOOLERS' WEAR

Trimmings and decorations	Income level			Average
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers preferring			%
Fancy buttons	96	93	80	90
Pockets	76	75	79	77
Embroidery	49	70	76	65
Collar	48	52	55	52
Lace	44	40	50	45
Applique	44	32	59	45
Piping	27	42	55	41
Sleeve variation	47	37	39	41
Yoke	37	42	39	39
Gathers	43	28	33	35
Pleats	32	23	30	28
Painting	8	20	31	28
Smocking	5	8	34	16
Tucks	9	12	21	14

The Table reveals that among the various types of trimmings and decorations fancy buttons and pockets were preferred to a great extent, since more than 75 per cent in the three income groups and 90 per cent on the average had stated the above. Embroidery was preferred by more than 70 per cent of middle and high income consumers; applique work by around 60 per cent of high income consumers. On an average, collars, lace, piping, yokes and gathers happened to be the other decorations preferred, by more than 35 per cent.

iv. Plackets and fasteners

The placket and fastener types preferred by the consumers are presented in Table X.

TABLE X

PLACKET AND FASTENER TYPES PREFERRED BY CONSUMERS FOR PRESCHOOLERS' WEAR

Placket/types Fastener	Income level			Average %
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers prefering			
Fastener types				
Front	79	88	87	86
Back	60	60	68	63
Side	20	3	36	20
Fastener types				
Nylon buttons	95	93	85	91
Press buttons	64	50	52	55
Hooks & eyes	64	43	53	53
Zippers	11	32	47	30

Front plackets were more preferred than others, as indicated by 86 per cent of the sample. Back opening was preferred by 63 per cent and only 20 per cent liked side openings for the preschoolers' wear.

As regards fasteners, nylon buttons were more preferred as stated by 91 per cent on an average. By more than 50 per cent press buttons and hooks and eyes were also preferred. Zippers, a fashionable and expensive fastener found use in high income families.

v. Clothing types preferred and reasons for such preferences

Clothing types preferred

The types of clothing preferred by the consumers for preschool children are given in Table XI.

TABLE XI

CLOTHING TYPES PREFERRED BY CONSUMERS FOR PRESCHOOLERS

Clothing type	Income level			Average
	Low (75)	Middle (60)	High (165)	
	Percentage of consumers preferring			%
Tailormade	97	85	80	87
Readymade	40	60	79	60
Homemade	..	15	15	10

A majority of the consumers 87 per cent on an average, preferred tailormade garments; 97 per cent in low, 85 per

cent in middle and 80 per cent in high income levels. This shows the popularity of tailormade garments. Readymade garments seemed to be more popular among the middle and high income than in the low income families. Those who purchased readymades patronised also the tailormade garments. Few made garments at home in the middle and high income families and none in low income families. As regards tailormade garments, frocks, shirts and half pants were the main clothing items preferred by 75, 85 and 90 per cent of the samples in low, middle and high income families respectively. Very few went to tailors for getting bell bottoms and maxies.

Among readymade varieties frocks, half pants and shirts were the major items preferred by 75, 80 and 85 per cent of the consumers in low, middle and high income groups respectively. Bell bottoms and maxies were preferred by 60 per cent of the high and 45 per cent of the middle income families respectively. Those who stitched at home, stitched mainly undergarments and girls wear such as frock, skirts and blouses.

Reasons for preferring tailormade, readymade and homemade garments

Tailormade clothing

Durability was considered to be the main reason for consumers in getting preschoolers' clothing tailormade and this is evident from the statements of 55, 65 and 60 per cent of the samples in low, middle and high income groups

respectively. Reasonable tailoring charges, good fit and chances for selecting fabrics of their own taste were the main reasons citéd by consumers, for such preference of tailormade items.

Readymade clothing

Attractiveness proved to be the main reason for preferring readymade clothing among consumers. The availability of a variety of fashionable styles and durability seemed to be the other good reasons cited by them.

Homemade clothing

Among the very few who preferred homemade clothing for preschoolers, the main reasons stated were a good fit and economy.

vi. Problems faced in clothing types

The problems faced by consumers in using readymade garments for preschoolers is given in Table XII and Fig. II.

TABLE XII

PROBLEMS FACED BY CONSUMERS IN USING READYMADE GARMENTS FOR PRESCHOOLERS

Problems faced	Income level			Average
	Low (75)	Middle (60)	High (165)	
	No. purchasing readymades			%
	(30)	(36)	(130)	
	Percentage of consumers answering			
Poor workmanship	67	83	81	77
High cost	93	75	45	71
Poor fitting	23	67	85	58
Non durable trimmings and decorations	20	64	82	55
Over decoration	13	58	78	50
Use of different types of materials	27	42	57	42
Non durable fasteners	7	44	51	34
Fading of colours	27	25	39	30
Poor colour combination	7	22	19	16

PROBLEMS FACED BY CONSUMERS IN USING READYMADE GARMENTS FOR PRE SCHOOLERS

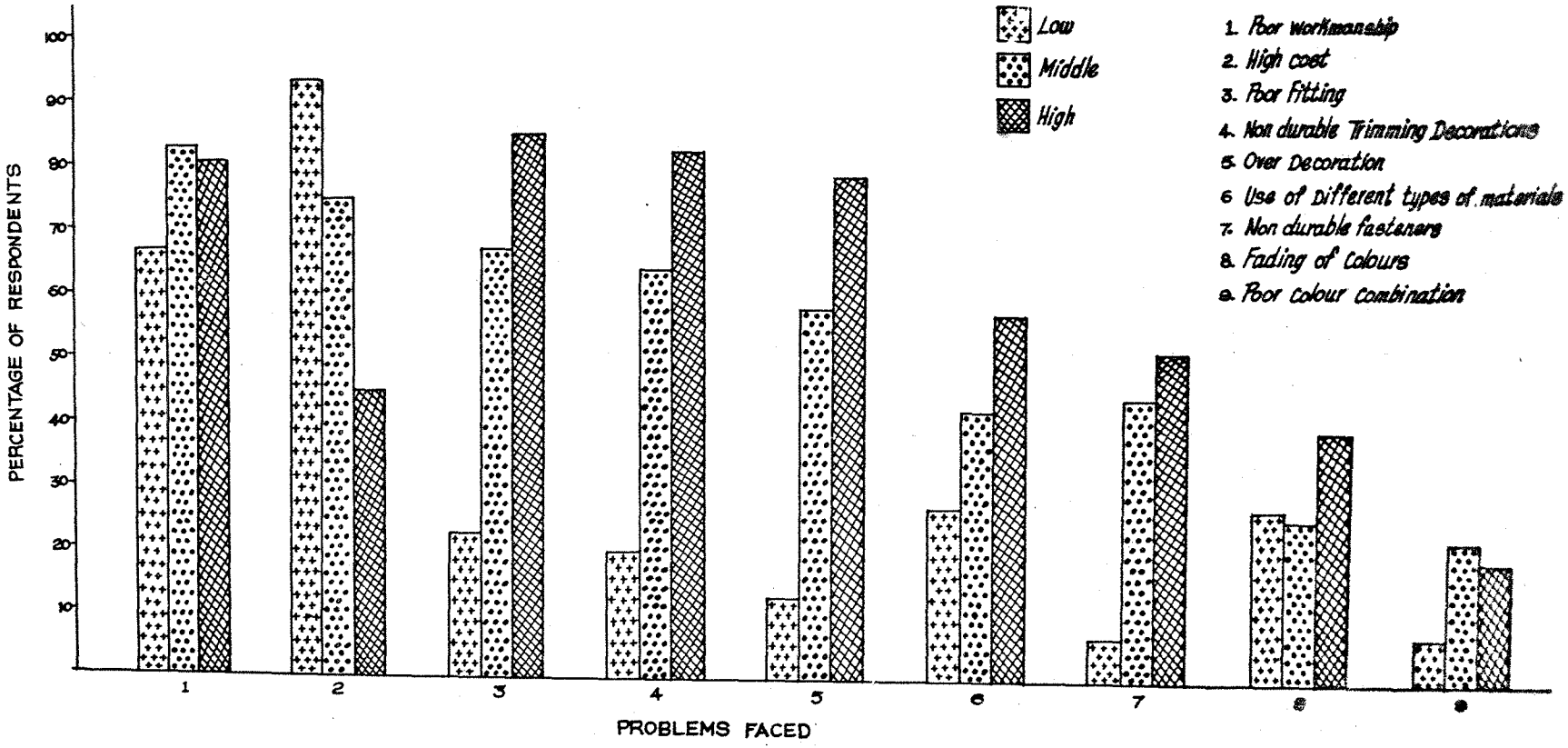


Figure-6

Poor workmanship happened to be the main problem in readymades as stated by more than 80 per cent of consumers in middle and high income and 67 per cent in the low income groups. High cost proved to be the next problem as expressed by more than 90 per cent of the low and 75 per cent of the middle income families. Only 45 per cent expressed this problem in high income level since most of them could etidently afford to go into ready to wear goods. The problem of a poor fit was expressed by 85 per cent of high income and 67 per cent of middle income consumers. Low income families seemed not much bothered about a good fit. Lack of durability in trimmings and decorations and over decoration were faced by the majority of the consumers particularly in the high and middle income levels. The other problems happened to be the use of different types of materials, lack of durability in fasteners, and lack of colour fastness in fabrics used for readymade garments.

iii. Suggestions for improvement

Seventy two per cent in the high income group and 64 per cent in the middle income group felt that preschoolers' clothing must be comfortable and attractive. Fiftytwo per cent of the sample in the low income group suggested that the material for preschoolers' clothing should be less costly with attractive designs and colours. Simplicity in pattern, good workmanship and washability of material were suggested by around 30 per cent of the consumers in low, middle and high income groups.

viii. Factors influencing children in their clothing selection as perceived by consumers

The aspects in which children inflenced in their own clothing selection as perceived by consumers is depicted in Table XIII.

TABLE XIII

FACTORS INFLUENCING CHILDREN IN THEIR CLOTHING SELECTION AS PERCEIVED BY CONSUMERS

S.No.	Aspect	Income level			Average
		Low (75)	Middle (60)	High (65)	
		Percentage of consumers answering			%
1.	Garment type	51	58	60	56
2.	Colour of fabric	45	48	52	48
3.	Garment style	35	45	55	45
4.	Type of fabric	95	35	52	44
5.	Design of fabric	39	40	42	40
6.	Decoration	20	25	30	25
7.	Placket type	12	20	25	19
8.	Fasteners	21	17	10	16

From Table XIII it is clear that children got influenced by such factors as garment types and styles, colours, designs and fabric types. Income level evidently had little effect in any of these aspects which influenced children in their clothing selection.

3. Views of educated mothers on preschoolers' wear

The findings of the survey conducted on 100 educated mothers who had preschool boys and 100 educated mothers who had preschool girls are presented in the following order:

a. Purchasing habits of mothers
b. Sources of information for purchase
c. Mothers' preferences for garments
d. Fiber varieties preferred by the mothers
e. Fabric preferences for garments
f. Texture, design and colour preferences
g. Trimmings and decorations
h. Plackets and fasteners
i. Problems faced by mothers in preschoolers' garments and
j. Factors influencing children in clothing selection

a. Purchasing habits

In regard to purchasing habits, 80 per cent of the mothers reported that both the parents made the purchases for their preschool boys' clothing, 12 per cent mentioned mothers alone, and 8 per cent, fathers alone. The child participated in clothing selection in only very few cases.

Eighty one per cent of the mothers reported that both the parents made the purchases for their preschool girls' clothing. While 15 per cent mentioned mothers alone, 4 per cent stated that the purchase was done by father alone.

b. Sources of information

In the selection of both preschool boys' and girls' clothing around 75 per cent of the mothers got information from friends and 50 per cent from neighbours. Magazines and advertisements were the sources of information for 35 per cent.

c. Mothers preferences for garments

Educated mothers preferred different types of garments for their preschoolers--boys and girls, readymade, tailor-made or homemade. Their preferences are revealed in Table XIV.

TABLE XIV

MOTHERS' PREFERENCES FOR PRESCHOOLERS' GARMENTS

Details	Preferred by	Readymade	Tailor made	Homemade
		Percentage of mothers prefering		
Boys' wear				
Full shirt	63	27	47	4
Bush shirt	92	48	49	3
Half pant	92	51	58	4
Babe suit	52	50	3	..
Bell bottom	44	36	10	1
Banian	78	78	..	..
Average %	70	49	28	2
Girl's wear				
Frock	100	56	43	52
Pantees	100	50	28	39
Maxi	48	52	56	42
Skirt	42	35	48	57
Blouse	42	29	40	57
Average %	66	44	43	49

Bush shirts and half pants were preferred by 92 per cent of the mothers. Full shirts were preferred by 63 per cent, baba suits by 52 per cent and bell bottoms by 44 per cent. Around 80 per cent preferred readymade baniams. Those who preferred tailormade garments purchased also readymade varieties. The average total reveals that around 50 per cent preferred readymade garments and 28 per cent tailormade garments. Around 50 per cent of the mothers preferred readymade bush shits, half pants and baba suits. While around 60 per cent preferred tailormade half pants, around 50 per cent preferred bush shirts and full shirts as tailormade.

The mostly preferred garments for preschool girls were frocks and panties as stated by all the mothers. As for readymade frocks 56 per cent of the mothers preferred them and 52 per cent preferred homemade frocks. Tailormade and readymade maxis were preferred by 56 and 52 per cent of the mothers respectively. Skirts and blouses were preferred as homemade by 57 per cent. The average total percentage reveals that around 50 per cent preferred homemade garments. Readymade and tailormade garments were preferred almost equally by 43-44 per cent. All the three types of garments were preferred and purchased by mothers.

Readymade garments were preferred mainly by the home-makers due to attractiveness (95%), varieties available (75%) and time saving quality (70%). Tailormade varieties

were preferred because they are cheap (as stated by 65%), time saving (50%) and durable (35%). Homemade garments were preferred mainly for their durability (as stated by 80%), economy (65%), style (50%) and a leisure time activity (30%).

d. Fiber varieties preferred by the mothers

For their children's wear, 80 per cent of the mothers preferred cotton varieties and 55 per cent, terycot. Twenty five per cent preferred wool. Nylon, pure silk and polyester were preferred by 20, 15 and 15 per cent respectively. The reasons given by the mothers for such preferences included: goodness of cotton for all seasons (60%), durability and washability (45%), and comfort and health point of view (35%). As for the preferences of terycot the reasons stated were: easy to maintain and needed no ironing (55%) and crease resistance (45%). Wool was preferred mainly for providing warmth during winter as stated by all the mothers.

e. Fabric preferences for garments

Table XV presents the data regarding the types of materials preferred by mothers for preschoolers.

TABLE XV

MOTHERS' PREFERENCE OF FABRICS FOR PRESCHOOLERS' GARMENTS

Details	Percentage of mothers preferring											
	Poplin	Cambric	Lawn	Voile	2/2	Drill	Cotton knit	Nylon	Stretch lon	Polyester	Terycot	Silk
Boys' wear												
Full shirt	58	..	..	..	39	..	..	..	..	39	38	..
Bush shirt	83	..	..	..	51	..	..	..	..	53	58	..
Half pant	84	..	..	..	4	64	..	..	35	2	64	..
Baba suit	17	..	..	..	10	..	..	..	17	25	24	..
Bell bottom	..	..	..	..	..	..	..	..	11	..	30	..
Banian	..	..	..	..	..	..	50	..	28	..	..	..
Average %	40	..	..	..	17	11	9	..	15	20	36	..
Girls wear												
Frock	46	32	30	6	55	..	9	10	7	17	31	15
Panty	83	23	2	..	..	..	25	..	..	..	15	..
Maxi	67	13	..	2	13	..	17	17	15	29	25	27
Skirt	71	36	..	4	..	..	19	7	5	19	31	36
Blouse	55	31	29	29	43	..	5	10	10	40	40	33
Average %	64	27	12	8	22	..	15	9	7	15	28	22

More than 80 per cent of the mothers gave their choice for poplin for bush shirts and for half pants. Around 60 per cent preferred the same fabric for full shirt also. For half pants 64 per cent preferred drill and terycot and 58 and 53 per cent respectively terycot and polyester. For bush shirts two by two was preferred by 51 per cent. Fifty per cent preferred cotton knitted material for banians. The average percentage reveals that cotton poplin followed by terycot were the materials most preferred by the mothers.

Table XV reveals also that poplin happens to be the most preferred material for girls' garments in general since 64 per cent were for this fabric. Terycot, cambric were the other materials preferred by about 28 per cent followed by two by two and silk by 22 per cent. Two by two was liked by 55 per cent of the mothers for frocks, and 43 per cent for blouses. Forty per cent preferred terycot blouses.

f. Texture, design and colour preferences

i. Texture

Ninety two per cent preferred fine smooth textured materials and 78 per cent preferred soft and medium textured materials for preschool boys' garments. The next preference was for superfine textures as stated by 35 per cent. None mentioned their preference for rough and coarse textures nor shiny fabrics.

Sixty five per cent of the mothers preferred fine textured fabrics and 42 per cent, medium textured and 32 per cent superfine materials. None preferred rough textures and a shiny texture was preferred by 9 per cent of the mothers. The main reasons for selecting fine and superfine fabrics for preschool girls' wear were attractiveness (90%), convenience in washing (86%), lightness in weight (65%), easy to stitch (52%).

ii. Design preferences

The fabric designs preferred by mothers for their preschoolers' garments are depicted in Table XVI.

Plain varieties were preferred by mothers for most of the garments. More than 60 per cent preferred them for bush shirts, half pants and banians. Check designs were preferred by 90 per cent for half pants and by 45 per cent for bush shirts. For bush shirt, 57 per cent preferred floral designs and around 30 per cent, birds and animals. Human and bird motifs were liked by 33 per cent and 23 per cent respectively for banians.

For girls' wear floral designs were preferred by more than 60 per cent of the mothers for maxis and frocks. Around 40 per cent preferred checks, dots and animal motifs for frocks. Sixty three per cent and 54 per cent preferred stripes and dots respectively for maxis. Floral designs were preferred for skirts and blouses by 38 and 42 per cent respectively.

iii. Colour preferences

Mothers were not very particular about colours for boys and had no clear concept about colours for their pre-schoolers. Forty per cent mentioned their preference for blue and white colours and 38 per cent preferred yellow green and red. Very few preferred the other colours such as orange and purple for preschool boys.

As for girls' wear red and blue were the mostly preferred colours by 52-53 per cent of the mothers. White, pink, green and yellow were the other colours preferred by around 35 per cent.

iv. Colour chromas

The colour intensities as preferred by mothers for their preschoolers are depicted in Table XVII.

TABLE XVII

MOTHERS' CHOICE OF COLOUR CHROMAS FOR PRESCHOOLERS WEAR

Details	Percentage of mothers answering				
	Bright	Dull	Light	Medium	Dark
Boys' wear					
Full shirt	19	..	51	35	..
Bush shirt	38	..	67	53	..
Half pant	53	..	11	31	67
Babe suit	26	..	11	33	11
Bell bottom	20	..	7	19	10
Banians	10	..	64	15	..
Average %	28	..	35	31	15
Girls' wear					
Frock	62	..	29	20	21
Pantees	20	..	28	25	54
Maxi	48	..	35	46	27
Skirt	42	..	24	19	31
Blouse	42	..	93	55	26
Average %	43	..	42	33	42

Sixty seven per cent liked a dark shade for half pants and light shade for bush shirts. Fifty three per

cent preferred bright shades for half pants and medium shades for bush shirt. Fifty one per cent of the mothers preferred light shades for boys' full shirts,. For banians 64 per cent preferred light shades. Around 40 per cent preferred bright shades for bush shirts. Dull colours were not preferred at all for boy's wear.

The intensity of colours as preferred by the mothers for their girls' garments reveal that bright, light and dark colours were liked by more than 40 per cent. For frocks 62 per cent preferred bright colours. Ninety three per cent preferred light shades for blouses and 55 per cent medium shades. Dark shades were preferred for skirts by 81 per cent. Both for skirts and blouse 42 per cent liked bright shades. For panties around 55 per cent preferred dark and medium shades. Bright and medium colours were preferred by more than 45 per cent for maxis.

9. Trimmings and decorations

The preferences of mothers in regard to trimmings and decorations are presented in Table XVIII relating to preschoolers' wear.

TABLE XVIII

TRIMMINGS AND DECORATIONS PREFERRED BY MOTHERS FOR PRESCHOOLERS

Details	Percentage of mothers preferring									
	Embroidery	Applique	Cut work	Lace	Tuck	Pleat	Pocket	Bow	Fancy buttons	Paintings
Boys' wear										
Bush shirt	17	17	..	2	..	..	64	..	..	..
Half pant	..	4	..	..	..	..	90	..	..	..
Baba suit	29	28	11	6	..	..	30	..	..	2
Bell bottom	..	4	..	..	..	..	32	..	..	..
Banian	..	..	..	..	..	..	..	..	..	22
Average %	8	9	2	1	..	..	43	..	..	4
Girls' wear										
Frock	60	35	29	53	22	36	40	14	37	..
Panty	3	2	1	43	30	..	..	..	5	..
Maxi	54	40	40	70	35	30	20	21	50	..
Shirt	10	33	29	33	5	36	..	10	..	..
Blouse	64	33	19	60	17	2	14	19	62	..
Average %	38	29	24	52	22	21	15	13	31	..

Sixty four per cent of the mothers of preschool boys and 40 per cent preferred pockets for bush shirts and full shirts respectively and 90 per cent preferred the same feature for half pants. Around 30 per cent preferred embroidery and applique work also for baba suits besides pockets. Pockets seemed to be the main attraction in children's wear specially for boys.

As for girls' wear 60 per cent of the mothers preferred embroidery work for frocks, pockets, fancy buttons, applique work, pleats and laces also were considered to be useful decorations for frocks by 30-40 per cent. While 70 per cent liked lace attachements for maxis 50-55 per cent gave their preference for embroidery and fancy buttons and 40 per cent for applique and cut work. More than 60 per cent preferred embroidery, fancy buttons and laces for the blouses of preschool girls. The average reveals that laces ranked first (52%) among other decorations such as embroidery and applique or fancy buttons.

h. Plackets and fasteners

Plackets are openings in garments and the placement can be in front, back or on the side. The type of plackets preferred by mothers in preschoolers' wear is depicted in Table XIX.

TABLE XIX

PLACKET PLACEMENT AS PREFERRED BY MOTHERS

Details	Percentage of mothers answering				
	Front	Back	Side	Shoulder	Without opening
Boys' wear					
Full shirt	63	..	..	..	..
Bush shirt	92	..	..	..	..
Half pant	81	..	46	..	..
Baba suit	28	..	28	..	..
Bell bottom	10	..	34	..	..
Banians	..	..	..	..	78
Average %	46	..	18	..	13
Girls' wear					
Frock	36	85	1	3	1
Panty	35	..	27	..	52
Maxi	23	77	27	10	25
Skirt	17	..	100	..	2
Blouse	83	60	..	..	..
Average %	39	44	31	3	16

The table shows that 92 per cent and 81 per cent of the mothers preferred front openings for the bush shirts and half pants respectively and for full shirts 63 per cent preferred the same. Around 80 per cent of the mothers were of the opinion that banians needed no plackets. Side openings were preferred by 46, 34 and 28 per cent of the mothers

respectively for half pants, baba suits and bell bottoms. In general, front openings were liked for boys' wear by mothers.

In regard to girls wear all the mothers (100%) wanted side openings for skirts. Most of the mothers preferred back opening as the average shown is around 45 per cent. For girls' blouses 83 per cent preferred front opening. More than 75 per cent liked back opening for frocks and maxis and 60 per cent liked the same for the blouses. Panties without opening were preferred by more than 50 per cent of the mothers.

Fasteners can be functional as well as decorative in children's wear, serving sometimes a double purpose. The type of fasteners preferred by mothers for preschoolers' garments are depicted in Table XX.

TABLE XX

FASTENER TYPES PREFERRED BY MOTHERS FOR PRESCHOOLERS WEAR

Details	Percentage of mothers preferring							
	Press buttons	Hooks & eyes	Plastic buttons & button holes	Nylon buttons	Metal buttons	Buckles	Bias cords	Zipper
Boy's wear								
Full shirt	..	..	..	62	8	..	..	..
Bush shirt	18	..	..	90	15	..	..	..
Half pant	..	..	83	4	10	81	..	..
Baba suit	21	..	..	5	10	..	..	..
Bell bottom	..	..	20	16	2	22	..	..
Banian	..	..	..	..	..	..	..	..
Average %	7	..	17	30	8	17	..	..
Girls' wear								
Frock	42	69	..	29	24	13	..	..
Panty	..	..	..	..	..	..	..	..
Maxi	35	38	..	38	25	21	6	17
Skirt	55	50	..	21	19	29	7	10
Blouse	69	90	..	19	10	7	5	..
Average %	40	49	..	21	16	14	6	5

For preschool boys 90 per cent and 62 per cent of the mothers preferred nylon buttons for bush shirts and full shirts respectively. More than 80 per cent of the mothers preferred plastic buttons with button holes and also buckles for half pants.

As for girls' garments, hooks and eyes and press buttons were found most suitable as stated by the majority of the mothers. For blouses 90 per cent and about 70 per cent of mothers preferred hooks and eyes and press buttons respectively. For skirts, 50-55 per cent preferred the same and about 70 per cent liked hooks and eyes for frocks also. For maxis 35-40 per cent liked press buttons, hooks and eyes and also nylon buttons.

i. Problems faced by mothers in preschoolers' garments

The major problems stated by the mothers with reference to the readymade varieties included non-availability of garments in required sizes, poor construction features, lack of serviceability in garments and very elaborate trimmings and decorations. These findings are found to be in agreement with those of the studies conducted by the Textile Committees in Tamil Nadu, Andhra Pradesh and Kerala which reveal that apart from the fact that readymade garments are not available in required sizes, they proved to be heavily priced with inappropriate designs and poor tailoring features.

The main problems faced by mothers in regard to trimmings and decorations were particularly due to laces (65%), embroidery and painting (40%) followed by fancy buttons (45%) and beads (30%). The suggestions as stated by mothers included that trimmings and decorations should suit the garment style and texture of fabric, stitches must be strong, and big fasteners must be avoided in preschoolers' wear.

1. Factors influencing children in clothing selection

As regards the preschool boys' influence in clothing selection, 30 per cent of the mothers stated, colour as the major factor by which the boys got influenced, the next factor according to 70 per cent of the mothers being style.

As regards preschool girls' influence in clothing selection, 80 per cent of the mothers stated that colour was the major factor which influenced the preschool girls, the next factor being design, according to 62 per cent. Prints influenced the children according to 46 per cent, trimmings and decorations and garment style according to 40 per cent and 31 per cent respectively.

B. Evaluation of the standardised body measurements

Results of the evaluation of the standardised body measurements are presented under the following main headings:

1. Standardisation of body measurements for selected women's wear and for preschool children
2. Evaluation of the standard measurements by constructing suitable dresses and
3. Study on selected anthropometric measurements of adult young women and preschoolers

1. Standardisation of body measurements for selected women's wear and for preschool children

a. Standardised measurements for Choli

The selected bust sizes for Choli included five main classes 70 cm (28"), 75 cm (30"), 80 cm (32"), 85 cm (34"), 90 cm (36"). For the bust sizes stated above, the following body measurements were standardised for 50 samples in each category.

i. Center Back length
ii. Center Front length
iii. Shoulder to Bust point
iv. Waist length
v. Sleeve length
vi. Waist circumference
vii. Back Shoulder width
viii. In between Bust points
ix. Lower Sleeve curcumference and

x. Armhole circumference

xi. Height

xii. Weight

The Standardised body measurements for the five bust sizes are depicted in Table XXI.

TABLE XXI

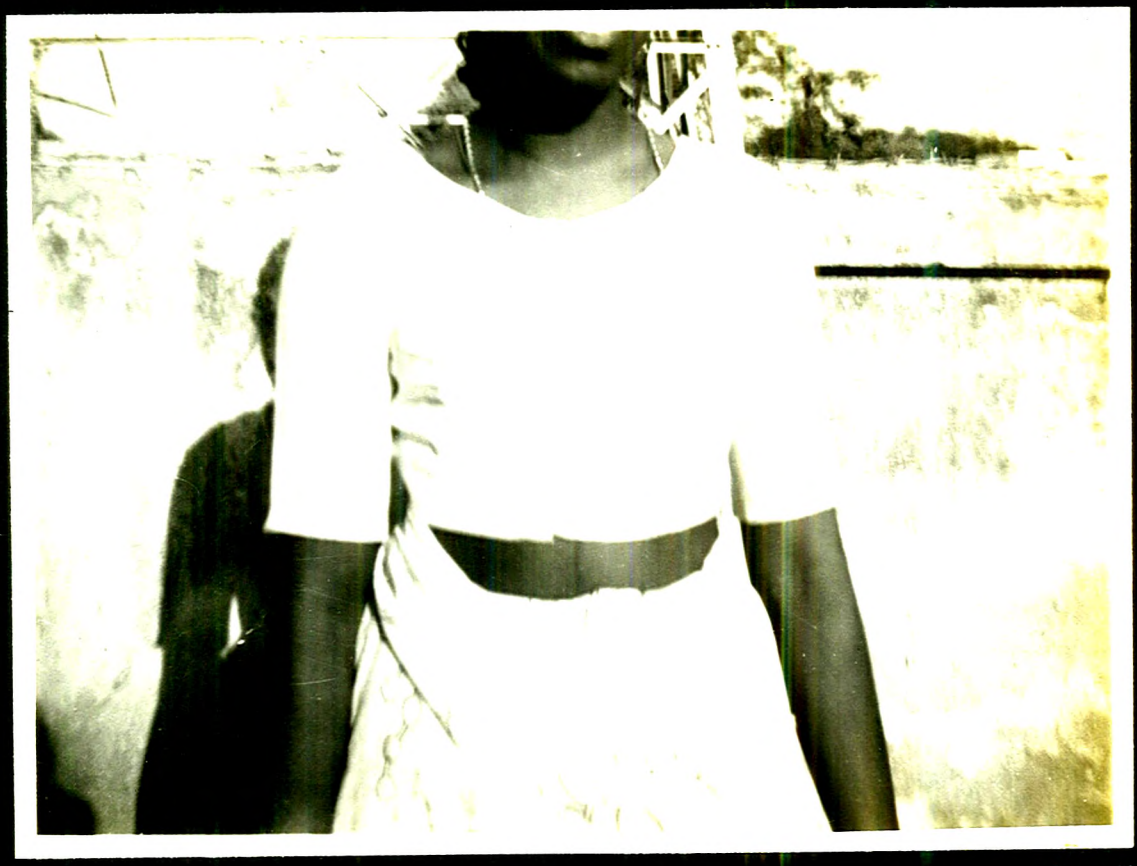
STANDARD BODY MEASUREMENTS FOR CHOLI FOR FIVE BUST SIZES

S.No.	Measurement	70cm	28"	75cm	30"	80cm	32"	85cm	34"	90 cm	36"
1.	Center Back length	32.5	13	35	14	35	14	35	14	37.5	15
2.	Center Front length	30	12	32.5	13	32.5	13	32.5	13	35	14
3.	Shoulder to Bust point	18.75	7½	20	8	20	8	20	8	22.5	9
4.	Waist length	35	14	37.5	15	37.5	15	38.75	15½	40	16
5.	Sleevelength	22.5	9	22.5	9	22.5	9	22.5	9	25	10
6.	Waist circumference	55	22	57.5	23	60	24	65	26	70	28
7.	Back shoulder width	31.25	12½	32.5	13	35	14	35	14	37.5	15
8.	In between Bust points	18.75	7½	18.75	7½	20	8	20	8	20	8
9.	Lower sleeve circumference	22.5	9	22.5	9	22.5	9	22.5	9	22.5	11
10.	Arm hole circumference	32.5	13	35	14	36.25	14½	36.25	14½	40	16

Most of the measurements are common to bust sizes 75 cm (30"), 80 cm (32") and 85 cm (34"). However, differences are found to exist in waist length and circumference, shoulder width and in circumference of armhole. Bust sizes 70 cm (28") and 90 cm (36") vary in almost all the measurements from the other three sizes.

b. Evaluation of the garment choli

With the above body measurements paper patterns were formulated and five muslin cholis were made. The muslin Cholis were evaluated for such aspects as the position of darts, armseye line, ease and comfort, general appearance. Table XXII presents the evaluation of the constructed cholis for five bust sizes as rated by ten candidates in each bust size. Size 80 cm (32") bust size which forms the standard for the majority of young women is shown in Plate XIV.



CHOLI-OUT OF STANDARD MEASUREMENTS FOR BUST SIZE 80 cm (32")

PLATE. XIV

TABLE XXII

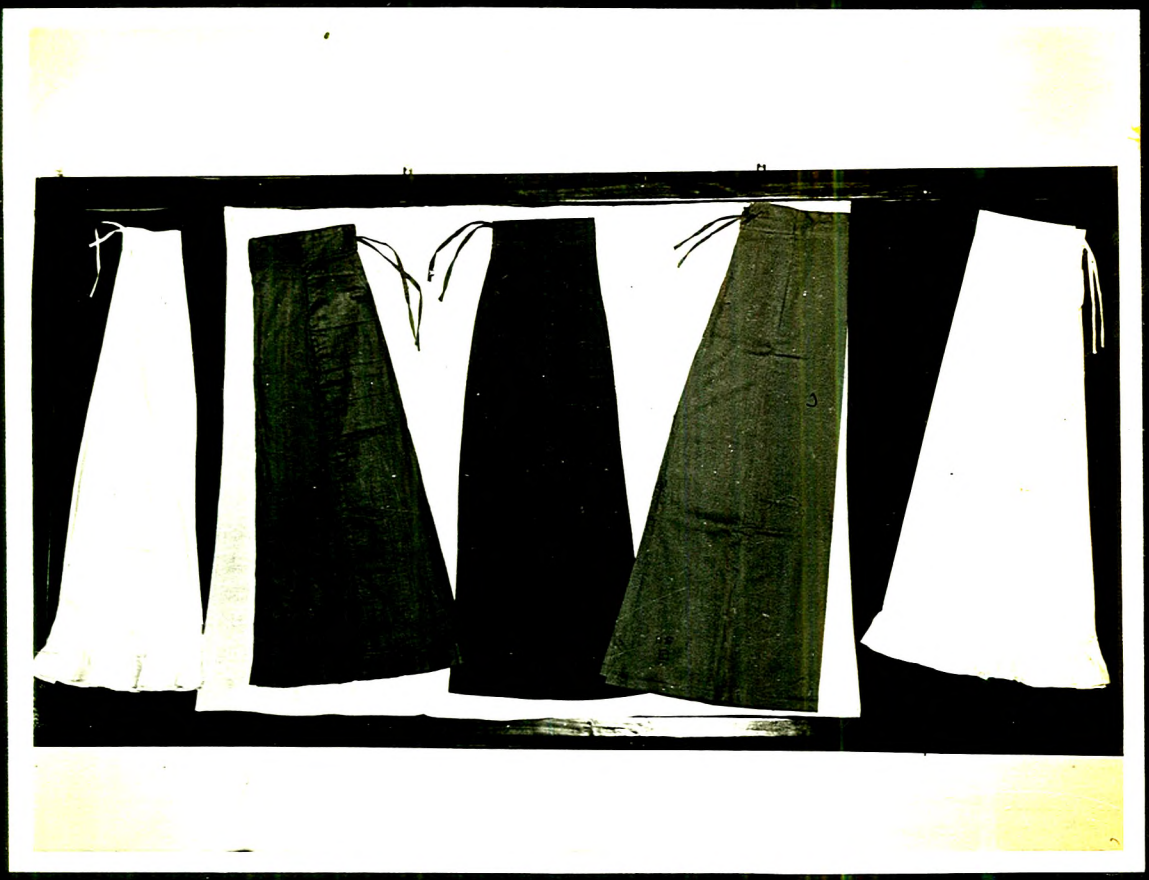
PANEL EVALUATION OF CHOLIS MADE OUT OF STANDARD MEASUREMENTS

Size		Percentage of judges stating											
		Position of darts			Armscye line			Ease, comfort			General appearance		
cm	inch	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor	Good	Fair	Poor
70	28	100	..	..	70	30	..	100	..	..	70	30	..
75	30	100	..	..	60	40	..	100	..	..	80	20	..
80	32	100	..	..	90	10	..	100	..	..	80	20	..
85	34	100	..	..	100	..	..	100	..	..	100	..	..
90	36	100	..	..	100	..	..	100	..	..	100	..	..

In the different bust sizes, all the candidates felt that the position of darts and ease and comfort very good. As regards the armseye line, in sizes 85 cm (34") and 90 cm (36") all stated the line was good. But in sizes 80 cm (32") and 70 cm (28") 90 per cent and 70 per cent respectively stated it was good, while in size 75 cm (30") only 60 per cent expressed the same. As regards general appearance all stated it was good in sizes 85 cm (34") and 90 cm (36"); 80 per cent in sizes 80 cm (32") and 75 cm (30") and 70 per cent in size 70 cm (28") respectively. The others felt it was 'Fair'.

c. Standardised measurements for petticoats

The standard sizes for petticoats included 90 cm (36"), 95 cm (38"), 100 cm (40"), 105 cm (42") (Plate XV). The hip and waist measurements were standardised for 600 samples based on length measurements, length being the standard for petticoats. The standardised measurements for petticoats for the four sizes are presented in Table XXIII.



A DISPLAY OF COLOURED AND WHITE PETTICOATS, PLAIN, SINGLE AND DOUBLE FRILLED, IN DIFFERENT SIZES

PLATE. XV

TABLE XXIII

STANDARD MEASUREMENTS FOR PETTICOATS FOR FOUR SIZES

Measurement	90 cm (36")	95 cm (38")	100 cm (40")	105 cm (42")
Hip	85-87.5cm (35"/36")	85-87.5 cm (35"/36")	92.5-95 cm (37"/38")	92.5-95 cm (37"/38")
Waist	62.5-65cm (25"/26")	62.5-65 cm (25"/26")	67.5-70 cm (27"/28")	67.5-70 cm (27"/28")
Waist to hip	17.5-20cm (7-8")	17.5-20 cm (7-8")	17.5-20 cm (7-8")	17.5-20 cm (7-8")

The standard body measurements for petticoats did not vary much. With length of the garment increasing the round measures also increased slightly or remained constant. Petticoat being a loose garment, it is possible to accommodate adequate allowance for fit and comfort also.

Since size 95 cm (38") and 100 cm (40") proved to be the sizes found most suitable for more than 78 per cent, these two sizes were selected for formulating paper patterns. Petticoats in these two sizes were stitched and they were subjected to an evaluation by ten candidates belonging to that particular size for such aspects as general appearance, comfort, drapability, fitting and construction aspects. The panel evaluation as done by the wearers is presented in Table XXIV.

TABLE XXIV

PANEL EVALUATION OF PETTICOATS MADE OUT OF STANDARD MEASUREMENTS

	Size 95 cm (38")			Size 100 cm (40")		
	Percentage of judges stating					
	Good	Fair	Poor	Good	Fair	Poor
General appearance	80	20	..	80	20	..
Comfort	60	40	..	100	..	..
Drapability	60	40	..	90	10	..
Fitting	100	..	..	100	..	..
Construction aspects	100	..	..	100	..	..

All the candidates were fully satisfied with fitting and construction aspects; 80 per cent rated general appearance as 'good'. Size 100 cm (40") was found to be comfortable and drapable to 100 and 90 per cent respectively. Size 95 cm (38") was rated as 'good' by 60 per cent for comfort and drape and 'fair' by 40 per cent.

d. Standardised body measurements of preschoolers

A total number of 430 preschool boys and 420 preschool girls in the 3-5 years range was taken as the sample for standardising body measurements. Of the above sample 92 per cent of the male children and 94 per cent of the female

children lended themselves for classification. The criteria set up was that a bust size should have at least a minimum of 20 samples. Under this adopted criterion eight bust sizes for male children and nine bust sizes for female children could be categorised. Based on the bust measurement, the other body measurements were classified. The results of the standardised body measurements of the male and female preschool children are presented in Tables XXV-A and XXV-B respectively.

TABLE XXV-A

STANDARDISED BODY MEASUREMENTS FOR PRESCHOOL BOYS

Body measurements	Number of children in each bust measurement (28)	(54)	(65)	(82)	(60)	(38)	(35)	(32)
	Bust measurement in centimetres 50	51	52	53	54	55	56	57
1. Neck to Shoulder	7	7	7/8	7/8	7/8	7/8	7/8	7/8
2. Centre Back length	24/25	24/25	24/25	25	25/26	25/26	25/27	26/27
3. Back Waist length	25	25/26	25/26	25/26	26/27	26/27	26/28	26/27
4. Centre Front length	24	24/25	24/25	24/25	24/26	24/26	25/27	26/27
5. Front Waist length	26	26/27	25/27	26/27	26/28	26/28	27/28	27/29
6. Total Sleeve length(outer)	33/34	34	34	35/36	35/36	36	38	38
7. Soulder to Elbow	17/18	17/18	18/19	20	20	20	20	20/21
8. Total Sleeve length(inner)	25/26	25/26	25/26	25/27	26	26/27	27/28	28
9. Waist to Heel	51/52	52/53	53/54	54/56	54/56	58/59	60	60
10. Waist to Ankle	47/48	48/49	50/51	51/52	51/52	53/54	56/57	57
11. Waist to Knee	28/29	29/30	30	30/32	30/32	31/32	32	32

(Contd.)

12. Waist to Thigh	14/15	15/16	16/17	15/17	16/17	17	18	18
13. Thigh Girth Straight	28/29	29/30	30/31	30/31	31/32	32/33	33/34	34
14. Thigh Girth slant	32/33	32/33	33/34	32/34	32/34	34/35	35/36	35/36
15. Crotch length total	36/37	38/39	38/39	38/40	38/40	40/41	40/41	41/42
16. Chest width Back	21/22	22/23	22/23	22/24	23/24	24	24/25	24/25
17. Back Shoulder width	23/24	24/25	24/26	24/26	25/26	25/26	25/26	25/26
18. Chest width Front	22/23	23/24	23/24	23/25	23/25	23/25	24/25	25
19. Armscye round	22/23	24	24/25	25/26	25/26	25/26	24/26	25/26
20. Upper arm round	15/16	16/17	16/17	16/17	17/18	17/18	18	18/19
21. Elbow round	15/16	15/16	16	16/17	16/17	16/17	17	17
22. Wrist round	11/12	11/12	12	12	12	12/13	13	13
23. Armscye depth	10	10	10	10/11	10/11	10/11	11/12	10/12
24. Round Neck measure	24	25	25	25/26	25/26	25/27	26/27	26/27
25. Waist round	48/49	49/50	50/52	52	52/53	52/54	53/55	54/55
26. Hip round	50/51	51/53	52/53	53/54	53/54	53/55	55/57	56/58
27. Crotch depth	13	13/14	14/15	14/15	14/15	14/15	14/15	15/16

Percentage of total sample = 92.

TABLE XXV-B

STANDARDISED BODY MEASUREMENTS FOR PRESCHOOL GIRLS

Measurements	Number of children in each Bust measurement (20)	(23)	(47)	(55)	(74)	(67)	(42)	(31)	(20)
	Bust measurement in centimeters 48	49	50	51	52	53	54	55	56
1. Neck to Shoulder	7	7/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8
2. Centre Back length	23/24	24/25	24/25	24/25	24/25	24/25	24/25	25	25
3. Back Waist length	23/25	25/26	25/27	25/26	25/26	25/26	25/26	26/27	26
4. Centre Front length	24/25	24/25	24/25	24/25	24/25	24/25	25/26	25/26	25
5. Front Waist length	26/27	26/27	26/27	26/27	26/27	26/27	27/28	27/28	27
6. Total Sleeve length(outer)	32/33	34/35	34/35	35/36	35/36	34/36	36/37	36/37	37/38
7. Shoulder to Elbow	17/18	18/19	18/20	19/20	19/20	19/20	20	20	20
8. Total Sleeve length (Inner)	24/25	24/25	25/26	25/26	26/27	26/27	26/27	26/27	27/29
9. Waist to Heel	53/54	54/55	55/56	56/57	56/57	57	57	59/60	60/62
10. Waist to Ankle	47/48	48/49	50/51	50/51	50/51	51/52	54	56/57	57/58
11. Waist to Knee	27/28	28/29	30	30/31	30/31	30/31	32	32	32/34
12. Waist to Thigh	16/17	15/17	15/16	15/16	15/16	15/17	15/17	16/17	17
13. Thigh girth straight	27/28	28	28/30	31/32	31/32	31/32	32/33	32/33	33/34

14. Thigh girth slant	30/31	31/32	31/32	32/33	32/33	32/33	35/36	37/38	37/38
15. Crotch length total	37/38	38	38	38/40	38/40	38/40	39/40	41/42	41/42
16. Chest width Back	21/22	21/22	21/22	22/23	23/24	23/24	23/24	24/25	25/26
17. Back shoulder width	25/26	26/27	26	26	26/27	26/27	26/27	26/27	26/27
18. Chest width Front	22/23	22/23	22/23	22/23	23/24	23/24	24/25	24/25	24/25
19. Armscye round	22/23	22/23	22/24	23/24	23/25	24/26	25/26	26	25/26
20. Upperarm round	15/16	15/16	16/17	16/17	17	16/17	17/18	18	18/19
21. Elbow round	14/15	15/16	15/16	15/16	16	16/17	16/17	16/17	16/17
22. Wrist round	11	11/12	11/12	12	12	12	12	12/13	12/13
23. Armscye depth	10	10	10	10	10	10/11	10/11	10/11	10/11
24. Round Neck	23/24	24	24/25	24/25	25/26	25/26	25/26	25/26	25/26
25. Waist Circumference	47	48/49	49/50	49/50	51/52	52/53	52/53	53/54	54/55
26. Hip Circumference	49/50	50/51	51/52	52/53	53/55	54/55	54/55	55/57	57
27. Crotch depth	14	15	15	15	15	15	15	15	15

Percentage of total sample = 94

Table XXV-A and XXV-B carrying the standardised body measurements for preschoolers reveal the following:

There was variation only upto 1-2 cm in the following measurements with increase in bust size.

Neck to Shoulder

Waist length

Thigh girth (Straight and slant)

Shoulder and Chest width

Elbow, Wrist and Neck measures, Armseye and Crotch depth

Certain measurements differed by two cm and these included Crotch and Sleeve lengths, Armseye, upper Arm and round measures. Length measurements such as Waist to Heel and Ankle and girth measurements as Waist and Hip varied considerably by 5-6 cm.

Preschool childrens' dresses should be comfortable and fitting, and must have allowance for growth and adjustments. Depending on the effect that the measurement is likely to produce on the garment a tolerence of 1-2 cm. is always acceptable and adjustments can be made. Where it is 2 cm difference the measurement must be taken care of as the garment should not affect the growth, comfort and fitting aspects of the child. With increase in bust sizes such length measurements as waist to heel and ankle and girth measurements as waist and hip also should be increased, as these vary to a considerable extent. In formulating the patterns

the above points need to be considered to have the desired effects in preschool children's dresses.

The above body measurements reveal that not much of variation is present between one bust measurement and another, and this was found to be in concordance with Brisbane and Riker's (1971) statement that the growth pattern is almost the same for both boys and girls in the preschool years.

e. Evaluation of preschoolers' garments

Children's wear at the preschool age bvel lend themselves to a variety of designs and styles. Two sets of garments for boys and two dresses for girls were designed and patterns were formulated using standard measurements. Consumer preferences and problems in preschoolers' clothing were kept in mind in making the outfits. The garments constructed out of standardised measurements for preschool boys and girls were put on children (Plates XVI and XVII) and evaluated by 50 judges in each case. Besides size and fit, aspects such as the appearance, material selection, dress design and construction features also were evaluated. The ratings as given by judges are presented in Tables XXVI-A and XXVI-B respectively for boys and girls.

PRE SCHOOL BOYS IN TWO OUTFITS CONSTRUCTED OUT OF STANDARD BODY MEASUREMENTS

PLATE. XVI

PRESCHOOL GIRLS IN TWO FROCK DESIGNS CONSTRUTED OUT OF STANDARD BODY MEASUREMENTS

PLATE. XVII

TABLE XXVI-A

EVALUATION OF DESIGNED AND CONSTRUCTED GARMENTS FOR PRESCHOOL BOYS OUT OF STANDARD MEASUREMENTS

Factor	Grade	A			B			Average %
		Bush Shirt	Half pant	Total %	Bush shirt	Half pant	Total %	
		Percentage of judges rating (No.of judges 50)						
1. General appearance	Good	86	80	83	88	86	87	85
	Fair	14	20	17	12	14	13	15
	Poor	..	..	..	..	..	..	..
2. Colour combination	Good	80	84	82	84	84	84	83
	Fair	20	16	18	16	16	16	17
	Poor	..	..	..	..	..	..	..
3. Fabric texture	Good	84	86	85	88	86	87	86
	Fair	16	14	15	12	14	13	14
	Poor	..	..	..	..	..	..	..
4. Fabric Design	Good	80	86	83	80	74	77	80
	Fair	20	14	17	20	26	23	20
	Poor	..	..	..	..	..	..	..
5. Dress Design	Good	80	68	74	74	78	76	75
	Fair	20	32	26	26	22	24	25
	Poor	..	..	..	..	..	..	..

(contd.)

Factor	Grade	A Bush shirt	A Half pant	A Total %	B Bush shirt	B Half pant	B Total %	Average %
		Perdentage of judges rating (No.of judges 50)						
6. Size fit & comfort	Good64	64	74	69	80	76	78	73.5
	Fair	36	26	31	20	24	22	26.5
	Poor	..	..	..	..	..	..	..
7. Construction aspects	Good	84	62	73	68	82	75	74
	Fair	16	38	27	32	18	25	26
	Poor	..	..	..	..	..	..	..
8. Average ratings	Good	80	77	78	80	81	81	79.5
	Fair	20	23	22	20	19	19	20.5
	Poor	..	..	..	..	..	..	..

TABLE XXVI-B

EVALUATION OF DESIGNED AND CONSTRUCTED GARMENTS FOR PRESCHOOL GIRLS OUT OF STANDARD MEASUREMENTS

	Frock A	Frock B	Average %
	No. of judges (50)		
	Percentage of judges rating		
1. General appearance			
Good	90	80	85
Fair	10	20	15
Poor	..	..	..
2. Colour combinations			
Good	98	86	92
Fair	2	14	8
Poor	..	..	..
3. Fabric texture and design			
Good	98	80	89
Fair	2	20	11
Poor	..	..	..
4. Dress designs, style			
Good	84	86	85
Fair	16	14	15
Poor	..	..	..
5. Size, fit & comfort			
Good	98	54	76
Fair	2	46	24
Poor	..	..	..
6. Self help features			
Good	100	44	72
Fair	..	56	28
Poor	..	..	..
7. Construction aspects			
Good	92	84	88
Fair	8	16	12
Poor	..	..	..
Average ratings--Good	94	73	84
Fair	6	27	16
Poor	..	..	..

Table XXVI-A reveals that more than 80 per cent rated the appearance, colour, texture and design of fabric as 'good'; more than 70 per cent rated dress design and construction features as 'good'. The ratings given to size and fit of the first set of garments (A) was slightly lower than the second (B); but around 70 per cent on an average had rated it to be good. This shows with some modifications in the patterns, the measurements could be used, for boys' wear.

Table XXVI-B reveals that more than 85 per cent of the judges rated the appearance, colour combinations of the dresses, texture, design of fabric and style of garment for girls and also the construction aspects as good. The size and fit and the self help features introduced in the first dress (A) gained greater appeal among the judges than the second one (B). On an average more than 70 per cent had given their ratings as good for these two aspects. Thus these dresses made out of standard measurements were found acceptable.

As regards the different dresses made out of standard body measurements, all the judges felt the size, fitting aspects and dress design were good and the dresses looked attractive on the children.

3. Results of the studies on selected anthropometric measurements of adult young women and preschoolers

a. Adult young women

i. Bust--Height

The bust-height measurements of 250 young women who formed the sample are depicted in Table XXVII.

TABLE XXVII

BUST-HEIGHT MEASUREMENTS OF 250 YOUNG WOMEN

Height in cm	Bust in cm					Total		Modal value
	70 (28")	75 (30")	80 (32")	85 (34")	90 (36")	No	%	
140-145	20	..	..	10	..	30	12	144*
145-150	1	5	10	5	5	26	10.4	
150-155	10	25	30	35	20	120	48	154*
155-160	14	20	10	..	24	68	27.2	158*
160-165	5	..	..	..	1	6	2.4	
Total	50	50	50	50	50	250	100	

(r = 0.10)

In the total sample, 48 per cent had a height of 150-155 cm. For sizes 75 cm (30"), 80 cm (32") and 85 cm (34") the modal height happened to be 154 cm. For size 90 cm (36") it was 158 cm, and for size 70 cm (28") it was 144 cm. When analysed statistically a very low positive correlation was found to exist between bust-height measurements (the value of 'r' being 0.10).

This is found to be in agreement with Goodman's statement (1958) on Bust-height relations of young women.

ii. Bust-Weight of young women

The bust weight measurements of the samples are depicted in Table XXVIII.

TABLE XXVIII

BUST-WEIGHT MEASUREMENTS OF 250 YOUNG WOMEN

Weight in kg.	Bust size in cm					Total		Modal value
	70 (28")	75 (30")	80 (32")	85 (34")	90 (36")	No	%	
40-45	20	..	..	10	..	30	12	44*
45-50	1	5	10	5	5	26	11	
50-55	10	25	30	35	20	120	48	54*
55-60	14	20	10	..	24	68	27	58*
60-65	5	..	..	..	1	6	2	
Total	50	50	50	50	50	250	100	

(r - 0.10)

In the total sample, 48 per cent weighed 50-55 kg. For bust sizes 75, 80 and 85 cm (30", 32" and 34") the modal weight happened to be 54 kg; for size 90 cm (36") it was 58 kg. and for size 70 cm (28") it was 44 kg. The statistical analysis revealed that a very low positive

correlation existed between bust-weight measurements (the value of 'r' being 0.10).

iii. Height-weight of young women

The height-weight measurements of the young women are depicted in Table XXIX.

TABLE XXIX

HEIGHT-WEIGHT MEASUREMENTS OF 250 YOUNG WOMEN

Height in cm.	Weight in kg. 44-46	46-48	48-50	50-52	52-54	54-56	56-58	58-60	60-62	Total No	Total %
	No. of women										
140-145	30	..	..	..	..	..	..	..	..	30	12.0
145-150	5	..	21	..	..	..	..	..	..	26	10.4
150-155	..	..	..	15	5	100	..	..	..	120	48.0
155-160	..	..	..	..	..	44	..	24	..	68	27.2
160-165	..	..	..	..	..	..	..	..	6	6	2.4
	35	..	21	15	5	144	..	24	6	250	100.0

(r = 0.91)

Out of 75 per cent of the sample who were 150-160 cm in height, around 58 per cent weighed 54-56 kg. When statistically analysed, a high positive correlation was found to exist between the height and weight measurements of the selected samples (the value of 'r' being 0.91). Thus, in the selected sample, the relation between bust-height and bust weight did not prove to be significant, while the height-weight relationship was significant.

The weight measurements of the adult young women for the particular heights when compared with those presented in the Manual of Life Insurance Corporation of India (1981) was found to be somewhat high except for those in the height range 145-150 cm.

b. Anthropometric measurements of preschoolers

Out of the 430 preschool boys who formed the sample, the body measurements of 394 boys could be categorised under eight bust sizes (50-57 cm). Out of the 420 preschool girls who formed the sample, 379 girls lent themselves for categorisation under nine bust sizes (48-56 cm).

i. Bust-Height measurements of boys

The bust-height measurements of the male preschoolers are depicted in Table XXX.

TABLE XXX

BUST HEIGHT MEASUREMENTS OF MALE PRESCHOOLERS

Bust size in cm	Height in cm (No. of preschoolers)								Total	%
	80-85	85-90	90-95	95-100	100-105	105-110	110-115	115-120		
50-51	1	3	10	7	1	4	1	1	28	7.1
51-52	2	4	24	16	5	2	1	..	54	13.7
52-53	..	3	17	32	10	2	..	1	65	16.5
53-54	2	4	19	35	14	7	..	1	82	20.8
54-55	1	3	12	21	17	4	2	..	60	15.2
55-56	..	2	6	10	16	3	1	..	38	9.6
56-57	1	1	8	6	9	7	2	1	35	8.9
57-58	..	2	4	4	16	5	..	1	32	8.1
Total	7	22	100	131	88	34	7	5	394	
%	1.8	5.6	25.4	33.2	22.3	8.6	1.8	1.3	..	100

(r = 0.25)

More than 50 per cent of the samples came under 52-54 cm. bust size. For 80 per cent, the height ranged from 90-105 cm (33 per cent had 95-100 cm), 25 per cent, 90-95 cm and 22 per cent had 100-105 cm as the height).

The bust height relationship on analysing statistically revealed a low positive correlation of 0.25.

ii. Bust-Height measurements of girls

The bust height measurements of preschool girls are presented in Table XXXI.

TABLE XXXI

BUST HEIGHT MEASUREMENTS OF FEMALE PRESCHOOLERS

Bust size in cm	Height in cm (No. of preschoolers)									Total	%
	80-85	85-90	90-95	95-100	100-105	105-110	110-115	115-120	120-125		
48-49	1	3	5	11	..	..	..	..	..	20	5.3
49-50	..	3	10	5	5	..	..	..	..	23	6.1
50-51	..	4	16	18	9	..	..	..	..	47	12.4
51-52	1	3	18	24	9	..	..	..	..	55	14.5
52-53	1	4	26	26	13	3	..	..	1	74	19.5
53-54	..	2	20	32	10	3	..	..	..	67	17.7
54-55	..	4	6	13	11	5	..	1	2	42	11.1
55-56	..	1	4	10	9	6	1	..	..	31	8.2
56-57	..	..	5	5	6	2	2	..	..	20	5.3
Total	3	24	110	144	72	19	3	1	3	379	100.00
%	0.8	6.3	29	38	19	5	0.8	0.3	0.8	100	

(r = 0.30)

The above table reveals that more than 50 per cent of the sample came under 51-53 cms bust sizes. For 86 per cent of the sample the height ranged from 90-105 cms; while 38 per cent and 29 per cent of the sample respectively had 95-100 cms and 90-95 cms as the height, 19 per cent had 100-105 cms. On analysing statistically the bust height relationship revealed there existed a low positive correlation of 0.30.

iii. Bust-Weight measurements of male children

The bust weight measurements of the male children are depicted in Table XXXII.

TABLE XXXII

BUST WEIGHT MEASUREMENTS OF MALE PRESCHOOLERS

Bust size in cm	Weight in kg. 9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total	%
	No. of preschoolers											
50-51	..	9	3	3	4	4	3	1	1	..	28	7.1
51-52	1	1	16	24	7	3	1	1	..	..	54	13.7
52-53	..	1	7	21	26	8	2	..	..	..	65	16.5
53-54	..	2	7	24	28	14	4	1	2	..	82	20.8
54-55	..	2	7	12	15	18	3	1	1	1	60	15.2
55-56	..	2	2	2	8	16	7	1	..	..	38	9.6
56-57	..	1	..	2	7	9	12	2	2	..	35	8.9
57-58	..	..	1	2	2	9	15	2	1	..	32	8.1
Total	1	18	43	90	97	81	47	9	7	1	394	100.00
%	0.3	4.6	10.9	22.8	24.6	20.6	11.9	2.3	1.8	0.3		100.0

(r = 0.45)

For 68 per cent, the weight ranged between 12-15 kg, 25 per cent weighed 13-14 kg, 23 per cent 12-13 kg and 21 per cent 14-15 kg respectively. On analysing statistically, the bust weight relationships revealed there existed a positive correlation of 0.45.

iv. Bust-Weight measurements of girls

The bust weight measurements of the female children are depicted in Table XXXIII.

TABLE XXXIII

BUST WEIGHT MEASUREMENTS OF FEMALE PRESCHOOLERS

Bust size in cm	Weight in kg												
	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	Total	%
	No.of preschoolers												
48-49	1	8	8	2	1	..	..	..	..	..	..	20	5.3
49-50	..	1	12	7	3	..	..	..	..	..	..	23	6.1
50-51	..	3	20	16	7	1	..	..	..	..	..	47	12.4
51-52	..	3	14	19	15	3	..	1	..	..	..	55	14.5
52-53	..	2	13	28	19	9	2	..	..	..	1	74	19.5
53-54	..	1	7	24	19	10	6	..	..	..	..	67	17.7
54-55	..	3	3	5	9	14	3	4	1	..	..	42	11.1
55-56	..	2	3	..	7	7	7	5	..	..	..	31	8.2
56-57	..	1	2	6	2	4	4	..	..	1	..	20	5.3
Total	1	24	82	107	82	48	22	10	1	1	1	379	100.0
%	0.3	6.3	21.6	28.2	21.6	12.7	5.8	2.6	0.3	0.3	0.3	100	

(r = 0.49)

More than 70 per cent of the sample weighed between 11-14 kg, 28 per cent weighed 12-13 kg and 22 per cent each weighed 11-12 and 13-14 kg respectively. The correlation coefficient between bust weight measurements showed the existence of a positive correlation of 0.49.

v. Height-Weight of boys

The height weight measurements of the male preschoolers are depicted in Table XXXIV.

TABLE XXXIV

HEIGHT-WEIGHT MEASUREMENTS OF MALE PRESCHOOLERS

Height in cm	Weight in kg. 9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	Total	%
	No. of preschoolers											
80-85	..	2	2	1	2	..	..	..	..	..	7	1.8
85-90	1	5	4	7	3	2	..	..	..	..	22	5.6
90-95	..	5	29	34	12	15	3	2	..	..	100	25.4
95-100	..	2	8	36	55	22	7	1	..	..	121	33.2
100-105	..	2	..	8	22	31	22	2	1	..	88	22.3
105-110	..	2	..	3	2	9	12	3	3	..	34	8.6
110-115	..	..	..	..	..	1	3	..	2	1	7	1.8
115-120	..	..	..	1	1	1	..	1	1	..	5	1.3
Total	1	18	43	90	97	81	47	9	7	1	394	
%	0.3	4.6	10.9	22.8	24.6	20.6	11.9	2.3	1.8	0.3		100.0

(r = 0.46)

For more than 80 per cent of the sample the height ranged from 90-105 cm, for 33 per cent 95-100 cm, for 25 per cent and 22 per cent, 90-95 cm and 100-105 cm respectively. The weight ranged from 12-15 kg. for 70 per cent of the sample.

The statistical analysis of the height weight relations of the male preschool children revealed the existence of a positive correlation of 0.46.

vi. Height-Weight of girls

The height weight measurements of the female preschoolers are depicted in Table XXXV.

TABLE XXXV

HEIGHT WEIGHT MEASUREMENTS OF FEMALE PRESCHOOLERS

Height in cm	Weight in kg												
	9-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	Total	%
	No.of preschoolers												
80-85	..	..	1	1	1	..	..	..	..	..	..	3	0.8
85-90	..	7	10	2	5	..	..	..	..	..	..	24	6.3
90-95	1	7	46	38	10	6	1	1	..	..	..	110	29
95-100	..	7	24	50	47	14	2	..	..	..	..	144	38
100-105	..	..	1	13	18	24	13	2	1	..	..	72	19
105-110	..	..	..	..	1	4	6	6	..	1	1	19	5
110-115	..	1	..	1	..	..	..	1	..	..	..	3	0.8
115-120	..	1	..	..	..	..	..	..	..	..	..	1	0.3
120-125	..	1	..	2	..	..	..	..	..	..	..	3	0.8
Total	1	24	82	107	82	48	22	10	1	1	1	379	100
%	0.3	6.3	21.6	28.2	21.6	12.7	5.8	2.6	0.3	0.3	0.3	100	

(r = 0.47)

More than 85 per cent of the sample ranged from 90 cm-105 cm in height. While 38 per cent had 95-100 cm and 29 per cent, 90-95 cm, 19 per cent had 100-105 cm respectively as their height. For more than 70 per cent in the selected sample, the weight ranged from 11-14 kg; 28 per cent weighed 12-13 kg and 22 per cent each weighed 11-12 kg and 13-14 kg respectively. The statistical analysis revealed a positive correlation of 0.47 between height and weight measurements of the female preschoolers.

It is clear from the above that for both male and female preschool children a low positive correlation is found to be present in bust height measurements. The correlation is found to be greater in bust weight and height weight measurements in the two sexes in this age level rather than the bust height measurements.

The main height weight measurements of the preschoolers based on age is presented in Table XXXVI.

TABLE XXXVI

MEAN HEIGHT/WEIGHT MEASUREMENTS OF PRESCHOOLERS BASED ON AGE

		This study			ICMR study(All India)/Tamil Nadu			
	Age-years	No.	Ht-cm	Wt-kg.	Ht-cm	Wt-kg	Ht-cm	Wt-kg
Male								
Total No.394	3	135	93.8	11.8	88.8	11.8	88.9	11.6
	4	187	95.7	13.3	96.0	13.5	93.0	13.1
	5	72	103.1	14.1	102.1	14.8	103.4	15.4
Female								
Total No.379	3	158	94.1	12.0	87.2	11.2	82.8	12.1
	4	179	97.4	12.9	94.5	12.9	82.5	12.2
	5	42	101.0	14.1	101.4	14.5	105.2	14.1

Except for the height of the 3 year old male preschoolers the others were fairly in agreement with the ICMR figures (Gopalan and Vijayaraghavan, 1971), at all India level. As for the female children, the weight is found to be in greater agreement than the height.

In this study the mean weight of the 3-5 year old male and female preschoolers was 12.69 kg and 12.68 kg respectively; the mean height was 96.38 cm and 96.51 cm respectively. As such there was negligible difference in these measurements between male and female children.

C. Assessment of the training programme

The vocational training programme in garment making was conducted for a period of six months (January 1, 1979 to June 30, 1979) within which time, the course contents outlined in the curriculum formulated for the purpose could be covered. The trainees gained knowledge and skills in garment making, and also developed keen interest in the endeavour. They were given repeated experiences in straight stitching making use of the sewing machines, and in making similar types of garments over and over again so that they could master the art of tailoring. While undergoing the training, if any local orders came, they accepted the same and carried them out since it helped them to gain practice and experience in stitching besides augmenting their income. The findings of the assessment of training programme are discussed under the following heads:

1. Participation of the candidates in the programme
2. Evaluation of skill development in the candidates
3. Financial implications in implementing the training programme and
4. Self assessment by the participants

1. Participation of the candidates in the programme

The programme was implemented mostly for six days per week. The trainees were motivated to attend the classes regularly. Considering the fact they hailed from very low

income rural families, all the materials were provided to them free of cost for the training. This served as an incentive to avail the opportunity and acquire knowledge and skills.

Their participation in the training, during the six months period, as pictured from the consolidation of attendance is depected in Appendix XXVIII.

Seven candidates on an average had more than 90 per cent attendance during the training period, two had 85 and 89 per cent respectively, and one had 78 per cent. This shows that the candidates were regular in their participation in the training programme.

2. Evaluation of skill development in the candidates

a. Bench mark evaluation

At the outset soon after joining the course the candidates were tested for the knowledge and skill they possessed in stitching. It was found that six knew some hand stitches, and could mend tears, but none knew how to operate the sewing machine and hence the course was started right from the operation of the sewing machine leading to straight and curved stitching and making of garments that involved the above techniques. The candidates learnt and worked on shift system at Vivekanandapuram tailoring unit (Plate XVIII).

b. Evaluation of skill development

The development of skills in candidates was periodically

CANDIDATES WORKING IN SHIFT SYSTEM AT VIVEKANANDAPURAM TAILORING UNI

PLATE. X

assessed. This was done by evaluating the construction features in the finished garments at specific intervals of time.

During first two months of the course, the candidates started making simple garments such as knickers, infants dresses, girls frocks, and boy's shirts. These finished set of garments were evaluated for such basic construction features as seams, hems, neck finishes and plackets by ten judges. The summary of the scores of evaluation as rated by the judges is given in Table XXXVII.

TABLE XXXVII

PANEL JUDGEMENT ON GARMENTS FOR CONSTRUCTION FEATURES

No. of candidates	Scores given by ten judges										Average %
	1	2	3	4	5	6	7	8	9	10	
1	4	5	4	4	4	5	4	4	4	4	42
2	3	4	3	3	4	4	4	4	3	3	35
3	4	3	4	4	4	4	3	4	4	4	38
4	4	4	5	4	5	5	4	4	4	4	43
5	3	3	5	3	3	4	3	4	3	4	35
6	4	4	4	4	3	4	4	3	4	4	38
7	4	3	3	4	4	4	3	4	4	4	37
8	4	3	3	4	4	4	3	3	4	4	36
9	3	4	4	4	4	4	3	3	3	3	35
10	3	4	4	4	3	3	4	4	4	3	36

For the first set of garments made, the maximum scores secured was 43 per cent and the minimum 35 per cent. Being

the initial stage evidently, the performance of the candidates did not prove to be satisfactory, since they were in the learning process.

At the next stage, two garments, the sari petticoat and the choli were selected for evaluation at the end of fourth and fifth months of training respectively. The summary of the scores of the evaluation of petticoats are depicted in Table XXXVIII-A and B respectively.

TABLE XXXVIII-A

PANEL JUDGEMENT ON PETTICOATS FOR CONSTRUCTION FEATURES

No.of candi-dates	Scores given by ten judges										Average %
	1	2	3	4	5	6	7	8	9	10	
1	7	7	8	7	7	8	7	7	7	7	72
2	6	8	6	7	7	7	7	7	7	7	69
3	7	7	7	6	7	7	8	8	7	7	71
4	8	9	9	9	9	9	9	8	8	8	86
5	8	7	8	7	8	7	8	7	7	7	74
6	7	7	6	7	7	7	7	7	6	7	68
7	6	7	6	6	7	7	7	6	6	6	64
8	7	7	7	6	6	7	7	7	7	7	68
9	7	8	6	7	7	7	7	7	7	7	70
10	6	7	6	6	7	6	7	6	6	6	63

TABLE XXXVIII-B

No. of candidates	Scores given by ten judges										Average %
	1	2	3	4	5	6	7	8	9	10	
1	7	8	8	7	8	8	8	8	8	8	78
2	6	7	6	7	6	7	7	7	7	6	66
3	6	7	7	7	7	7	7	7	7	7	69
4	8	9	9	8	9	9	9	8	9	8	86
5	6	7	7	7	7	7	6	7	6	6	66
6	6	6	6	7	6	6	7	6	7	6	63
7	6	5	7	6	6	5	7	6	6	6	60
8	7	8	7	7	7	8	8	7	8	7	74
9	7	7	7	8	7	7	7	7	8	7	72
10	7	8	7	7	8	7	7	8	7	7	73

From tables XXXVIII-A and B, it is clear that the performance of the candidates was good by the end of the fourth and fifth months' training. The maximum scores obtained were 86 per cent in both cases, and the minimum 63 and 60 per cent respectively, as rated by the judges. There was not much of a difference in the performance between the fourth and fifth months training. As a statistical procedure the Students' 't' test adopted also revealed the same (the 't' value being 0.63).

The summary of the scores of the evaluation of choli at the end of fourth and fifth months' training period is presented in Tables XXXIX-A and B respectively.

TABLE XXXIX-A

PANEL JUDGEMENT ON CHOLIS FOR CONSTRUCTION FEATURES

No. of candidates	Scores given by ten judges										Average %
	1	2	3	4	5	6	7	8	9	10	
1	6	5	7	6	6	6	6	6	6	6	60
2	6	6	6	7	7	7	7	7	7	7	67
3	6	7	6	6	7	6	7	6	6	6	63
4	7	7	8	8	8	8	8	8	7	8	77
5	4	5	5	5	5	4	5	5	5	5	48
6	6	5	5	6	6	6	6	6	6	5	57
7	6	6	5	5	6	6	6	6	6	5	57
8	7	6	5	6	6	5	6	6	6	5	58
9	6	6	6	7	6	6	6	6	6	6	61
10	7	6	6	7	6	6	6	7	7	6	64

TABLE XXXIX-B

No. of candidates	Scores given by ten judges										Average %
	1	2	3	4	5	6	7	8	9	10	
1	7	6	7	7	7	7	7	7	7	7	69
2	5	6	5	5	5	5	5	5	5	5	51
3	6	7	6	7	6	7	7	7	7	6	66
4	7	8	8	8	9	7	8	8	8	8	79
5	6	7	6	7	6	6	6	6	6	6	62
6	6	6	7	7	7	6	6	6	6	6	63
7	6	6	6	7	6	6	6	7	6	6	62
8	6	6	7	6	6	7	6	6	6	6	62
9	6	7	6	6	7	6	6	6	6	6	62
10	6	6	6	6	6	7	6	6	6	6	61

Tables XXXIX-A and reveal that the maximum scores obtained were 77 and 79 per cent, and the minimum 48 and 51 per cent respectively. As in the case of petticoats, in the case of cholis also, there was not much difference in their performance between the fourth and fifth months' training. The students' 't' test adopted as a statistical measure also revealed the same (the 't' value being 0.80).

The results of the initial performance when compared with the final performance revealed there was immense progress in their skill development. The scores obtained for the two

outfits also revealed that the progress of the ten candidates proved to be quite satisfactory since even by the end of fourth month, the candidates had attained perfection in stitching. This induced the investigator to train them further for productive work and also assign the above garments for production.

3. Cost incurred in training

The cost incurred during the training period is described below. At Vivekanandapuram free accomodation was granted at the School of Agriculture and therefore the question of paying rent for the premises did not arise. For conducting the training programme five sewing machines were borrowed from Sri Avinashilingam Home Science College, Clothing Department and taken to the spot. The most essential non consumable items required for implementing the training for ten candidates were purchased. Also the essential consumable articles such as fabrics, needles, threads and stationery items were purchased. To the extent possible free transportation was availed to supervise the programme. An instructress qualified technically was employed and an honorarium was paid.

The cost incurred under the different heads for the first seven months are presented below:

		Rs.Ps.
Non-recurring		
1. Non consumable items		245.00
Recurring		
2. Raw Materials		
Fabrics	605.00	
Accessories	270.00	875.00
3. Honorarium for Technical Assistant (7 x 150)		1050.00
4. Miscellaneous		
Stationery	60.00	
Machine maintenance	95.00	
Others	60.00	215.00
5. Rental value		
Sewing machines (5 x Rs.25 x 6 months)		750.00
Electric iron (Rs.5 x 6 months)		30.00
Furniture items (Rs.25 x 6 months) (Folding chairs 8, Table 1, Trunk 1)		150.00
Accomodation (Rs.25 x 7 months)		175.00
	Total cost	Rs.3490.00

Without the rent for equipment, furniture items and accomodation the cost would amount to Rs.2170/-. If a training programme of this calibre is to be conducted by an organiser under normal conditions, free facilities such as the sewing machines, furniture items or accommodation will not be available. These will have to be either purchased or obtained on rental basis only. If the above items are

purchased, the initial cost for minimum equipment would amount to around Rs.5000/- but the machinery and equipment could be utilised to conduct several such training programmes. Hence to be realistic regarding the cost incurred on the use of the above items, the rent was included for the above items. The cost incurred on the above basis amounted to Rs.3490/- for six months' training period.

In this development programme the trainees were the real beneficiaries with knowledge and skills acquired by them free of cost.

4. Self assessment of candidates

The self assessment of candidates during the sixth month of the training programme revealed the following. The candidates stated that before joining the class none knew any machine sewing nor how to construct a garment. They further stated that after joining the class they had learnt to construct

panties and underwear
frocks and shirts
gathered and gored skirts
cholis and blouses

The self assessment revealed also that they had gained confidence in stitching petticoats and cholis very well.

According to the trainees, they were regular and punctual to their classes and the sewing classes were beneficial and interesting. Six candidates stated they could stitch very well and four stated they could stitch fairly well. All were of the opinion they were interested in sewing even before joining the class and their interest increased to a considerable extent after joining the class.

D. Evaluation of the production aspects of the programme

The production aspects of the programme included the following features:

1. Participation of the trainees in the programme
2. Production of garments
3. Financial implications
4. Output per worker
5. Evaluation of trainees
6. Study of consumer reactions

1. Participation of the trainees in the programme

The production programme was implemented for 22 months with one month vacation. Within four months after the starting of production, certain changes took place. Out of the ten candidates who underwent training two purchased sewing machines and set up tailoring on their own. Four candidates left the unit, two after producing for six months and the other two after eleven months, due to personal causes.

But three candidates joined the unit, learnt stitching for a few months. One among them got interested in producing goods and so she was absorbed in the unit. Right from the inception till the end, four candidates were very regular and their attendance proved to be more than 90 per cent. Thus at any one point of time the production unit in tailoring had five candidates for producing goods. On an average, the candidates worked for five hours per day partly on shift basis. The working days during the production period amounted to 448 days.

2. Production of garments

The number and types of garments produced during the production period are presented in Table XL.

TABLE XL

GARMENTS PRODUCED IN TAILORING UNIT DURING PRODUCTION PERIOD

S.No.	Source	No. of items produced									
		Petti-coat	Choli	Frock	Shirt	Uniform	Linen items	Miscel-lane-ous	Total Number	Qty in metres	Value in Rs.
	As orders from										
I.	1. NTC	2196	..	109	..	..	..	..	2305	3810	22715
	2. Villages	80	140	7	20	5	..	45	297	275	1845
	3. Campus	21	8	90	2	50	5	5	181	225	2100
	4. KVIC	160	..	..	..	..	..	..	160	240	2880
II.	Out of fabrics purchased for readymades	355	..	55	6	..	226	90	732	1070	6260
	Total	2812	148	261	28	55	231	140	3675	5620	35800

From Table XL it is clear that the major source for the orders was NTC. A total of 2305 garments including 990 plain, 1206 frilled skirts and 109 frocks brought as making charges, an amount of Rs.5382/- and this is shown in Appendix XXIX. While coloured and white petticoats of plain, single frilled and double frilled varieties formed the major items of production (Plate XIX), the total quantity of 5620 metres of fabric worth Rs.35,800 were converted to 3675 garments of different types. Next to petticoats ranked the frocks of different styles, which had a demand for sales among consumers. (Plates XX and XXI).

The average amount earned by a candidate per month varied as it depended on the orders received by the production unit and the wages paid to the workers. Payment of wages depended on the types of garments produced. For petticoats 75 paise to Re.1/- was paid depending on the type, plain or frilled. As for frocks, the wages depended on the style, fashion and decorations involved. For cholis from Re.1/- to Rs.1.50 was paid depending on the style plain or cut.

Garment making was a seasonal occupation and the peak period of earning proved to be from August to November. During these months massive orders came considering the ensuing festive occasions, Deepavali, Christmas and Pongal. The number of garments produced, the wages paid to workers

COLOURED AND WHITE PETTICOATS FORMED THE MAJOR ITEM OF PRODUCTION

PLATE. XIX

FROCKS FOR PRESCHOOL GIRLS - READY FOR SALE

PLATE. XXI

and average earnings per worker proved to be higher during September and October than during the other months of the year. On an average the candidates could earn around Rs.25-30 per month. This proved to be an additional income for their families. Situated as it was in the farm area during the rainy and winter seasons, the girls found it difficult to reach the spot. Moreover when important domestic work demanded their presence in their homes or in the field, they did not turn up for this work.

3. Financial implications

One of the major items of expenditure was the raw materials which included fabrics and related accessories for sewing. An honorarium for the instructress had to be paid. Depending on the number and types of garments produced, wages for the workers had to be paid. Besides the above, miscellaneous expenditure such as maintenance of sewing machines and stationery items also was incurred. To the extent possible free transportation was availed in supervising the programme.

The tailoring unit realised income from different sources. The stitching charges realised from NTC formed one of the major sources of income. Also making charges were realised for orders undertaken from nearby villages and the campus. The raw materials purchased were converted to different types of garments during the slack periods. For these

garments the cost of production was calculated depending on the garment style and 15 to 20 per cent of this amount was added and the selling price was fixed. Thus the income for the tailoring unit was from two sources.

1. as tailoring charges received for items made
2. as the income received from the sale of garments produced out of raw materials purchased for the purpose.

The receipts of the tailoring unit under the different heads for the 21 months' production period were:

		Rs.Ps.
1.	From NTC as stitching charges	5381.50
2.	From KVIC as stitching charges	354.50
3.	Stitching charges from villages and campus	537.00
4.	From sale of garments	6863.00
5.	Miscellaneous income	114.00
	Total receipts ..	13250.00

The expenditure incurred in implementing the tailoring unit during the production period is given below:

			Rs.Ps.
1.	Raw materials		7105.00
2.	Honorarium (for Instructress)	3300.00	
	Wages (for candidates)	3000.00	6300.00

3. Miscellaneous

		Rs.Ps.
Machine maintenance	150.00	
Stationary	270.00	
Others	240.00	660.00
Total recurring expenditure		14065.00
Value of closing stock of raw materials		2620.00
Actual expenditure		11445.00
Total receipts		13250.00
Total expenditure		11445.00
	Excess income	1805.00

With free facilities as equipment, furniture items and accomodation a sum of Rs.1805/- could be realised. Even though 21 calendar months were taken into consideration the number of working days amounted to 448 days only, due to extraneous factors which was equivalent to 18 months of efficient production.

Sewing machines are available at subsidised rates for beneficiaries of the Integrated Rural Development Programme. Hence a sum of Rs.5000/- would be adequate for capital investment for purchase of machinery. If an organiser borrows a sum of Rs.5000/- for the purchase of minimum equipment from nationalised banks, where loan facilities are made available for IRDP at Differential Interest Rates (4%) and establishes a unit of this type in his own premises he

could realise this amount in 18 months time. Financial assistance for the construction of community halls are granted under the National Rural Employment Programme to implement such schemes and these opportunities also can be utilised.

The interest payable to the bank at the rate of 4 per cent would amount to Rs.300/-. The organiser then would realise a sum of Rs.1003/- per year and he would be in a position to repay the loan taken by him in five years time.

But if nominal depreciation charges for equipment and rent for premises are included it would be as given below.

	Rs.Ps.
Amount realised	1805.00
After paying interest	300.00
	1505.00
Depreciation charges	
(for Rs.5000/- for 18 months at the rate of 10%)	750.00
Rent for the place (18 x Rs.25)	450.00
Balance amount	305.00

A production programme of this category will require a little more time to stand on its own legs. Given a period of three years time it is likely to get established and the

repayment of the loan could be facilitated within a shorter term.

4. Output per worker

The total number of garments produced during the production period when compared to the number of hours worked by the candidates revealed the output per worker was one to two garments per five hours of work. This was found to be somewhat low when compared to the production in professional garment units where on an average 3.5 pieces could be produced within this time. (Narayanaswami & Sriram, 1972). No doubt industrial sewing machines and specialised type of machinery are utilised in garment units. Further, workers are trained for specialisation for different processes in garment making such as collar and sleeve attachments. In this tailoring unit the work was done on a cooperative basis which also influenced the output.

Considering the distance and problems involved in communications and transporation any delay caused in feeding the unit regularly with raw materials resulted in lower output per worker. Moreover, except for selected standard apparel items that required less supervision the others could not be produced to the satisfaction of the consumers. All the above factors influenced production of garments particularly in the rural set up selected for this experiment.

5. Evaluation of trainees in the production programme

The interview conducted with the candidates revealed that while they were happy in that they could make use of the acquired skills for production purposes they expressed the desire to have work for all the days in all seasons and a more steady income than what they were receiving in the production scheme. Even though their earnings proved to be around Rs.65-75 per month during the festive months, the average earnings of the worker amounted to only Rs.25-30 per month. The reasons for the above can be attributed partly to the standard garments which formed the bulk items of production and these could not fetch them a high wage, even though the wage paid by the unit for petticoats was found to be higher than what was paid by garment units. This showed there was a need for increasing the output per worker and this could be achieved only by gaining greater speed in stitching on the part of the worker. Also the production unit needed more intensive feeding with raw materials to keep the participants fully engaged in all seasons.

Marketing of the produced goods posed problems, and the turnover was not as rapid as anticipated. But in the case of orders placed with the unit where fabrics were provided by the customers, there were no such problems.

In spite of all these limitations the candidates could earn Rs.400/- per year as wages for about five hours

work per day which can be considered as part time work. Since the heads of the families of these candidates were undertaking even 'kooli' jobs this amount is not something that can be treated as insignificant by them.

Particularly when the national average per capita income in India happens to be as low as Rs.1081/- per year (Times of India Directory, 1980-81) any additional income for low income families would be only a welcoming feature.

5. Study of consumer reactions

In order to study the consumer reactions on petticoats, a rating scale was administered to 155 consumers. One hundred and fifty consumers answered the rating scale.

a. Type and size of petticoats

White petticoats were purchased by 74 (49%) consumers and coloured petticoats by 57 (38%), and 19 (13%) had purchased both coloured and white petticoats respectively.

As regards the type of petticoats, 96 (64%) had purchased plain, 41 (27%) frilled, 13 (9%) both plain and frilled respectively.

As regards the size, 95 cm (38"), 100 cm (40") and 105 cm (42") seemed to be the most needed sizes since 59 (39%) had selected 100 cm (40") size, 38 (25%) and 30 (20%) members had selected 95 cm (38") and 105 cm (42") respectively. Table XLI reveals consumers' ratings on petticoats.

TABLE XLI

CONSUMERS' RATINGS ON PETTICOATS

Total No.150

No.	Details	Percentage of consumers rating					
		Very good	Good	Fairly good	Not so good	Poor	No answer
I.	**Fitting aspects**						
1.	Height	39	47	12	3	1	..
2.	Hip	36	46	15	3	1	..
3.	Waist	34	48	14	4	1	1
4.	Bottom	36	41	19	3	..	1
II.	Choice of fabric	11	23	15	5	1	46
1.	Durability	29	45	13	3	..	10
2.	Colourfastness	28	32	11	4	..	25
3.	Washability	31	49	11	3	..	5
III.	Other aspects						
1.	General appearance	34	37	9	1	..	19
2.	Stitching aspects	36	45	7	3	1	9
3.	Drapability	30	43	16	2	..	9
4.	Comfort in wearing	36	46	15	1	..	2

The petticoats were rated by the consumers for fitting aspects, choice of fabric, durability, colour fastness and washability. Certain other aspects such as general appearance, stitching drapability and comfort also were rated by them.

The price range was Rs.13-20 depending on the quality of the material.

b. Fitting aspects

More than 35 per cent had rated the height and hip as very good. More than 45 per cent had rated them as good. Twelve per cent and 15 per cent had rated the height and hip as fairly good respectively.

As for the waist 34 per cent had rated as 'very good' and 48 per cent as good. While for the bottom of the skirt 36 per cent had rated it as 'very good', 41 per cent as 'good'. Nineteen per cent and 14 per cent had rated the bottom and waist as 'fairly good' respectively. Few had rated them as 'not so good' or'poor'.

c. Choice of fabric

Durability was rated as 'very good' by 29 per cent and 'good' by 45 per cent. Ten per cent gave no answer; evidently they needed more time to assess this aspect. Thirteen per cent stated it was 'fairly good'. Colour fastness was rated as 'very good' by 28 per cent and 'good' by 32 per cent. As regards washability 31 per cent had rated it as'very good' and 49 per cent as 'good'. Around 11-13 per cent had rated the above aspects as 'fairly good' and few had rated them as 'not good' or 'poor'.

d. Other aspects

The general appearance was rated as 'very good' by 34 per cent and as 'good' by 37 per cent. Nine per cent had rated it as 'fairly good'. Nineteen per cent did not answer and nine per cent rated it as 'fairly good'.

As regards stitching aspects, 36 per cent had rated as 'very good' and 45 per cent as 'good'. Nine per cent gave no answer and 7 per cent rated it as 'fairly good'.

The drapability of the garment was rated as 'very good' by 30 per cent and as 'good' by 43 per cent. Sixteen per cent rated it as 'fairly good' and nine per cent gave no answer.

As regards comfort in wearing it was rated as 'very good' by 36 per cent and 'good' by 46 per cent. Fifteen

per cent rated it as 'fairly good'. Only few had rated the above aspects as 'not so good' or 'poor'.

From the above, it is clear that the fitting aspects and quality of fabric were good. Most of the consumers were pleased with the general appearance, stitching, drapability, and comfort in wearing.

e. Satisfactions derived by consumers

Eighty six per cent stated they were satisfied with the purchases made and 14 per cent stated they were dissatisfied. The satisfactions derived by consumers in the purchase and use of petticoats are given in Table XLII.

TABLE XLII

SATISFACTIONS DERIVED BY CONSUMERS IN THE PURCHASE AND USE OF PETTICOATS

Satisfaction	No.	%
Well fitting	35	23.3
Well stitched	33	22.00
Durable	27	18.00
Comfortable	24	16.00
Good quality	23	15.3
Reasonable cost	18	12.00
Colour fast	9	6.00
Good material	7	4.6
No shrinkage	7	4.6
Cheap	5	3.3
Villagers make	5	3.3
Washable	4	2.7
Easily available	3	2.00

While eight per cent had expressed there was a need for improvement in stitching aspects, six per cent had stated that alteration in hip/waist was needed. The need for variety in selection, increase in height, and hem circumference were the other suggestions made. A few felt sizes other than the standards also could be made available.

Standard sizes may suit the majority of human figures but not all. In cases where they do not suit the figure tailoring made to order to cater to individual needs is advisable. Such orders also were undertaken by the tailoring unit and done.

Summary and Conclusion

V SUMMARY AND CONCLUSION

In the current Sixth Plan Integrated Rural Development Programme is given major emphasis. The main objectives of this programme is to increase the employment opportunities of the rural poor. Hence this study was planned for rural young girls who were motivated to join a vocational training programme in garment making. The educational programme was utilised for providing employment to them by setting up a production unit in tailoring.

As a preliminary step to the above, consumer preferences and problems in clothing selection were studied. The findings of the surveys formed the basis for standardising body measurements for selected women's wear and for preschoolers' clothing. Adapting these measurements patterns were developed for making selected apparel items in the production unit.

The findings of the above aspects of the research work are summarised below:

Consumers' views on selected women's wear

Two hundred young women formed the sample. The majority of the consumers preferred tailormade cholis and readymade petticoats. While model cholis were given to tailor, the practice of giving body measurements was not

common. Poplin and longcloth were mainly preferred for petticoats and two/two and cambric for cholis. The common sizes in readymade petticoats happened to be 100 cms (40") and 95 cm (38"). Six gored skirts were mostly preferred and almost all used only cut cholis. For cholis 70 cm length and for petticoats 2 metres were generally purchased for giving the tailor.

The main problems faced in readymade petticoats were improper and poor stitching aspects, and lack of colour-fastness in fabrics. Improper stitching, high charges, improper fitting were the main problems faced in tailormade items.

Consumers' and educated mothers' views on preschoolers' clothing

The sample included three hundred consumers from different income levels and two hundred educated mothers who had preschool children. The family income and clothing expenditure, family clothing and preschoolers' clothing expenditure on analysis revealed a positive correlation, in low, middle and high income families.

Preschoolers' clothing was purchased mainly during festive occasions, from local shops and town; the other factors influencing were income for low income families, style and fashion for middle and high income families.

While according to mothers and high income consumers both the parents participated in clothing purchases, in low income families, the head alone conducted this job. A higher income and educational level influenced them to allow a greater freedom to their children also in clothing choice. Both for consumers and mothers the main source of information for clothing purchase were friends and neighbours.

Tailormade garments were popular among the majority in the three income groups of consumers. Readymades were popular only in the middle and high income groups. Mothers preferred tailormade and readymade items for boy's wear; for girls' wear homemade and tailormade items were preferred. The preference of homemade garments can be attributed to the higher level of education and knowledge in making children's wear. According to consumers and mothers, attractiveness, availability of fashionable styles and the saving of time induced them to purchase readymade varieties. While tailormade items were considered to be durable by consumers, mothers considered them cheap and time saving. Durability, economy and style were the reasons that influenced mothers to make children's wear at home.

The main problems faced in readymade clothing according to consumers and mothers were poor workmanship with nondurable decorations, non availability of garments in

required sizes, poor fitting aspects, high cost and lack of serviceability.

The suggestions given by them for improvement were the use of serviceable fabrics of lower cost with attractive designs. Frocks, shirts and half pants were the major items preferred by consumers and mothers for preschoolers.

Front openings were preferred in garments by the majority of consumers, followed by back opening. Mothers felt front openings were ideal for bush shirts and half pants, back opening for frocks, maxis and for blouses and side opening for skirts.

The majority of the consumers preferred nylon buttons. Mothers preferred them for bush shirts and for half pants, plastic buttons and buckles for girls' wear, hooks and eyes and press buttons were preferred. Zippers found a use in high income families only, as they were expensive.

As decorative features, fancy buttons and pockets were preferred by consumers to a great extent. Embroidery and applique work were preferred in high income families. Mothers preferred pockets for boys' dresses, embroidery work for frocks and lace for maxis.

Irrespective of income levels the consumers and mothers preferred cotton fabrics for preschoolers' wear. With increasing income, preference for terrycot was greater

than for cotton. Poplin, cambric and two by two were the fabrics mostly preferred by consumers. Cotton was preferred by them, because of reasonable price, durability, washability and comfort in all seasons. Terycots were preferred due to such qualities as crease resistance and easy maintanance.

While smooth and soft textured fabrics were preferred by the majority for boys' wear, fine and medium textured fabrics were preferred for girls' wear.

Printed fabrics were preferred by consumers more than plain varieties. Among textile designs, checks, floral, dots and lines were the mostly preferred ones in the three income groups. Educated mothers preferred plain fabrics for shirts, and half pants, followed by checks for half pants and floral designs for bush shirts and frocks; for maxi's floral designs, stripes and dots were preferred.

While consumers preferred light pink, cream and blue and combinations with white, mothers had no clear conception regarding colours for preschoolers' dresses. Dark shades for half pants, light shades for bush shirts, and blouses, bright colours for frocks were preferred.

Children got influenced by garment type, style, colour, design and fabric varieties.

The surveys revealed: Income level had a definite influence on the purchase of readymade goods and also in the choice of fabrics. Also a higher educational level enabled mothers to construct selected children's wear at home.

Standardising body measurements

Thirteen body measurements, including heights and weights of 250 young women were standardised to five bust sizes for cholis and patterns were developed. The evaluation of muslin cholis revealed that the position of darts, ease and comfort were good as rated by the judges. However there were some differences of opinions in regard to armseye line and general appearance but this was found to be negligible.

For sari petticoats, the hip and waist measurements were standardised based on length for 600 samples into four sizes. The evaluation of petticoats by judges, revealed they were satisfied with general appearance, fitting and construction aspects. However, there were some differences of opinions in regard to comfort and drapability but this was found to be negligible.

Out of 394 male and 379 female samples eight bust sizes for male and nine for female preschool children could be standardised for thirty body measurements including bust,

height and weight. The standardised body measurements at preschool age level revealed that the variations in the body measurements among different bust sizes amounted to 1-2 cms only except in a few selected length and round measurements.

The evaluation of the most common outfits such as frocks, shirts and half pants constructed out of standard body measurements revealed that these garments were rated as 'good' in general appearance, fitting aspects, fabric selection, dress design and construction features and found acceptable to mothers.

The standardised sizes for cholis and petticoats would find a use in garment units. The standardised measurements for preschoolers can be adopted for developing suitable dress designs.

Studies on anthropometry

The bust height and the bust weight measurements of the young women on analysis revealed a low positive correlation, while the height weight relations, a high positive correlation.

In bust height measurements for preschoolers a low positive correlation was found to be present. In bust weight and height weight measurements in the two sexes the relationship was found to be greater than bust height measurements.

There was negligible difference in the mean heights and weights of male and female children.

Vocational Training Programme

The candidates were regular in their participation in the training programme. The ten candidates selected for training revealed, they could be trained to acquire the required skills in making women's and children's wear, within six months. Their progress was found to be satisfactory. With minimum facilities and equipment the cost incurred for training ten candidates for six months amounted to Rs.3490/-.

Self assessment of the candidates during the end of the training period revealed their immense satisfaction in acquiring knowledge and skills for constructing women's and children's wear.

Apart from the immense confidence that was developed in them for making petticoats and cholis, sewing classes were highly interesting and beneficial to them. Training proved to be an asset to them for future employment purposes.

The redeeming features of the training revealed that rural girls who were seasonally unemployed could be motivated to undergo training in garment making. That they came forward to acquire new skills is an indication of their behavioural change.

The skills in them could be developed to an extent of producing standard garment items within as short a duration as six months' time.

Production Programme

The participation of the trainees in the production programme revealed that at a time, five candidates were present in the tailoring unit for production purposes. On an average a candidate could earn Rs.400/- an year. This was a sum that could not be despised with particularly for very low income families whose occupation happened to be daily wage earning.

Also the fact that orders were continuously forthcoming for the tailoring unit from the NTC showed that the manufactured goods had the standards of quality, gained recognition, could undergo competition in the clothing market.

From the returns of the production unit it was evident that any loan taken for minimum capital investment could be returned within five years. Improved returns can be expected with greater concentration, supervision and mobilisation of orders. Hence it would be a profitable venture, for unemployed youth to start tailoring units since these would cater to self employment.

An evaluation of the trainees revealed they wished to obtain a steadier income and this could be achieved only by improved output per worker and steady feeding of the unit with raw material.

Study of consumer reactions

Among the 150 consumers surveyed white plain petticoats were more popular than frilled or coloured varieties and the common sizes purchased were found to be 95 cm (38"), 100 cm (45"), 105 cm (42") respectively. The majority of the consumers were satisfied with general appearance, fitting and stitching aspects, quality of fabric, drapability and comfort in wearing. That they were satisfied with the purchases made revealed that petticoats can be undertaken for mass production within a short period of training of candidates.

Recommendations

Sizing of apparel in India is still in its infant stage.

1. The adaptability of patterns for cholis can be tested further on larger samples, modifications made and commercial patterns can be formulated which would find a use in garment units, homes and institutions.

2. Patterns for trial were developed for a few selected apparel items of preschoolers, most commonly purchased by consumers and used for their children. With the standard measurements now available there is a greater scope for developing commercial patterns for a variety of dress designs for preschoolers.

3. Body measurements can be standardised for bust sizes for individual garments also and patterns can be formulated in different age groups, for the use of garment units.

4. Vocational training for rural youth is recommended for a period of one year since this will not only enhance their knowledge in dressmaking but also their speed in garment making and thus the output per worker.

5. Garment units must be set up where close supervision and full attention could be devoted, since high originality in the formulation of new designs, and keeping pace with changing concepts of fashions of consumers are fundamental requirements.

6. Instead of standard apparel items, more intricate garments with attractive dress designs should be undertaken and accomplished since the above would fetch increased returns both for the wage earner and the production unit.

7. Continuous orders from different sources should be forthcoming for a production unit. To facilitate marketing

of the produced goods, the agency for marketing must be different.

8. Training provided by schemes of IRDP, TRYSEM, must be availed by rural youth as attractive stipends are provided for trainees. On completion of the training the trainees are also helped to apply for bank loans and subsidies which give them an opportunity for self-employment.

9. The facilities offered by nationalised banks could be availed for obtaining loans for capital investment. Further, sewing machine companies provide the beneficiaries of IRDP with machines at subsidised rates. During certain seasons attractive discounts are offered by companies and these also can be availed.

10. In production units bulk purchases of raw materials must be made at lower costs, for garment making. Such materials need to be scientifically tested in technological laboratories for serviceability characteristics, before such purchases are made as this would facilitate consumer acceptance of goods purchased.

11. Standard fabrics with increased width at reasonable costs are basic requirements for garment units. Hence textile mills should be advised to produce such fabrics specially for the purposes of garment units and make them available.

12. For clothing the masses of India, readymade garments must be made available in proper sizes with serviceable fabrics at cheaper rates, with good workmanship and attractive design features. Unless the above is accommplished, it will be difficult for the ordinary consumer to go in for readymade goods and for the organisers of garment units to tap the potential of the clothing market of India.

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Appendices

APPENDIX I

LIST OF GRAMSEVIKAS AND MUKHYASEVIKAS IN POSITION IN DIFFERENT STATES

State	Gramsevikas	Mukhyasevikas
Andhra Pradesh	876	300
Assam	334	90
Bihar	428	43
Gujarat	133	64
Haryana	76	60
Karnataka	269	149
Kerala	418	87
MP	768	..
Maharashtra	869	227
Manipur	70	12
Meghalaya	39	15
Nagaland	25	..
Orissa	529	..
Punjab	297	117
Rajasthan	94	47
Tamilnadu	624	272
Tripura	..	17
UP	478	97
W.B.	669	334
A & N Island	10	4
Chandigarh	1	..
Dadra & N Havel	1	1
Delhi	4	..
C.D. & Div.	20	11
Pondicherry	8	3
Total	7040	1950

Source: (Directorate of Extension, Government of India, 1980).

APPENDIX II

READYMADE GARMENT INDUSTRY AT A GLANCE

	India	Karnataka*	Tamilnadu	West Bengal*	Delhi	Maharashtra**
1. Capacity (1977)						
Qty: Million Pcs	750	15	70	11	86	285
Val: Rs.Million	10200	197	944	145	1160	3600
2. Production (1977)						
Qty: Million Pcs	491	11	49	7	69	171
Val: Rs.Million	6614	148	661	94	929	2170
3. Raw material Consumption (1977) Million metres	836	19	83	12	133	291
4. Investment in Machinery(1977) Rs.Million	570	11	51	9	63	210
5. Number of sewing machines installed (1977)	312500	6250	29500	5000	36000	119000
6. Employment (1977) Nos.	480000	11000	32000	5000	45000	120000
7. Exports Rs.Million						
1975	1229.9	160.5	115.3	18.7	548.1	415.8
1976	2449.2	97.5	199.0	29.7	1154.2	855.7
1977	2408.2	101.5	212.4	40.5	1265.6	N.A.

8. Major Export: USA (29.7%), West Germany (16.0%), UK (15.2%) Netherlands (6.3%), France (5.8%).

Markets (1976): USSR (5.1%), Italy (4.1%), Canada (2.9%)

*Figures relate to Bangalore and Calcutta
**Figures for the year 1976

Source: Indian Institute of Foreign Trade (1978)

APPENDIX III

QUESTIONNAIRE TO ELICIT INFORMATION REGARDING PETTICOATS AND CHOLIS FROM CONSUMERS

1. Name of interviewee ..

2. Age ..

3. How do you make the purchase of the following garments?

Garment	Tailormade	Readymade
Petticoat	▱	▱
Choli	▱	▱

4. Do you allow the tailor to take body measurements?

or

Do you give him model garment for stitching?

Garment	Giving body measurements	Giving model garment for stitching
Petticoat	▱	▱
Choli	▱	▱

5. Indicate the amount of fabric you give the tailor for making petticoats and cholis

Garment	Amount of material given
Petticoat	
Choli	

6. Indicate the amount paid by you as tailoring charges for petticoats and cholis

Petticoats	Rs.
Cholis	Rs.

7. What problems do you face in tailormade garments?

Problem	Petticoat	Blouse
a. Improper stitching	▱	▱
b. Heavy charges	▱	▱
c. Shrinking after first wash	▱	▱
d. Improper fitting	▱	▱
e. Improper cutting	▱	▱
f. Much material is consumed	▱	▱
g. Any other		

8. What type of materials do you prefer for petticoats and cholis?

Petticoats

Poplin	▱
Longcloth	▱
Casement	▱
Satin	▱
Khadi	▱
Handloom	▱
Unbleached mull	▱

Any other, specify.

Cholis

Full voile	▱
Cambric	▱
Two by two	▱
Two by one	▱
Nylon	▱

Polyestrr/terene ▱

Pure silk ▱

Art silk/rayon ▱

Cotswool ▱

Terycot ▱

Knit ▱

Khadi ▱

Handloom ▱

Any other, specify.

9. Indicate the size of petticoats and cholis purchased by you.

Garment	Size purchased
Petticoat	
choli	

10. (a) What type of petticoats do you prefer? Tick ( ) below.

Four Gore ▱

Six Gore ▱

Single frill ▱

Double frill ▱

Laced ▱

Cutwork ▱

Embroidered ▱

Any other, specify.

(b) What type of choli do you prefer? Tick below.

Ordinary ▱

Cut choli ▱

(c) Tick ( ) below the style preferred by you.

Long sleeve	▱
Short sleeve	▱
Round neck	▱
V neck	▱
Close neck	▱
Boat neck	▱
Yoke	▱
Any other, specify.	

11. What type of texture do you prefer for petticoats and cholis? Tick ( ) below.

Texture	Petticoat	Choli
Coarse	▱	▱
Medium	▱	▱
Smooth	▱	▱
Shiny	▱	▱
Any other		

12. Mention the problems faced by you while using the ready-made petticoats and cholis. Tick ( ) below.

a. Poor stitching	▱
b. Improper fitting, size and shape	▱
c. Too many decorative trimmings used	▱
d. Fading of colour	▱

e. Shrinkage of material ▱

f. High cost ▱

g. Use of low quality fabrics ▱

h. Any other, specify.

13. Give your suggestions for improving readymade petticoats and cholis.

Petticoats

Cholis

APPENDIX IV

AN INTERVIEW SCHEDULE TO ELICIT INFORMATION ON CONSUMER PREFERENCE IN PRESCHOOLERS' CLOTHING

1. Name of the consumer and address ..

2. Family background ..

S.No.	Name	Relationship to head	Sex / Age	Education / Occupation	Income/month

Total: Income

3. How much do you allot for family clothing?

   a. Per month Per year

   b. How much do you spend on pre-school children's clothing items?

   Per month Per year

4. How often do you purchase clothing for preschool children?

   a. Annually

   b. Half-yearly

   c. Quarterly

   d. During festive occasions

   e. Any other time

5. Who selects clothing for preschool children?

   a. Father

   b. Mother

   c. Both

   d. Child himself

   e. Any other person

6. What factors influence the choice of clothing for your children?

   a. Income

   b. Standard of living

   c. Interest of the child

   d. Style and fashion

   e. Brand name

   f. Label information

   g. Serviceability

   h. Season

   i. Festivals and functions

   j. Price

   k. Reduction sales

   l. Any other

7. Where do you purchase clothing items of preschoolers?

Place	Reasons, if any
a. Local shops	
b. Shops in the town	
c. Super market	

d. Cooperative stores

e. Door sellers

f. If any other source, specify

8. State the sources of information that influence purchase of clothing

a. Friends and neighbours

b. Exhibitions

c. Fashion shows

d. Magazines

e. Movies

f. Posters and Bill boards

g. News papers

h. Radio

i. Window display

j. Any other

9. Which of the following do you prefer for preschool children?

a. Readymade

b. Tailormade

c. Homemade

a) Mention the clothing items you purchase as readymades for preschoolers. Give reasons.

Items purchased as readymades	Reasons

Indicate the problems involved in the use of readymade items.

b. Mention the clothing items given by you to the tailor for preschoolers. Give reasons.

Items given to tailor	Reasons

Indicate the problems involved in the use of tailormade garments.

c. What clothing items do you make for preschoolers at home? Give reasons.

Items made at home	Reasons

Indicate the problems involved in making the garments at home.

10. What type of fabrics do you prefer for preschoolers' clothing?

Fabrics	Boys' dresses	Girls' dresses
Cotton		
Poplin		
Voile		
Two/Two		
Lawn		
Cambric		
Denim		
Organdie		
Khadi		
Handloom		
Drill		
Knit		

Any other

Silk

Wool

Nylon

Rayon

Viscose

Acetate

Blends

Cotswool

Terycot

Any other

Mixtures

Rayon/Nylon

Cotton/Rayon

Cotton/Wool

Cotton/Silk

Silk/Nylon

Rayon/Silk

Any other

11. Which of the following do you prefer for preschoolers? Garments?

Plain

Printed

Combination of plain and printed

Any other

12. Indicate the designs preferred by you for preschoolers' dresses.

    1. Historic
    2. Abstract
    3. Geometric
    4. Floral
    5. Dots
    6. Checks
    7. Lines
    8. Any other

13. Indicate your preference in colours and combinations of colours for clothing the preschoolers.

Dresses	Colours	Colour combinations
Boys' dresses		
Girls' dresses		

14. State the type of textures preferred by you for preschoolers' clothing.

    1. Smooth
    2. Medium
    3. Shiny
    4. Coarse
    5. Any other

Does the child influence you in any of the following aspects in clothing selection?

    Type of garment

    Style

    Fabric

Design

Colour

Placket

Fasteners

Trimmings

Decorations

Any other

19. Give your suggestions for improving preschoolers' clothing.

Readymade ..

Tailormade ..

Homemade ..

20. Any other remarks or comments.

APPENDIX V

QUESTIONNAIRE TO ELICIT THE PREFERENCES OF EDUCATED MOTHERS IN THE CHOICE OF CLOTHING FOR PRESCHOOL BOYS AND GIRLS

1. Name ..
2. Address ..
3. Age of the child .. Sex ..
4. Income of the family ..
5. Amount alloted for family clothing (per year) ..
6. Amount alloted for preschool boys'/girls' clothing (per year) ..
7. Who selects clothing for the child? ..
   a. Father ..
   b. Mother ..
   c. Both (Parents) ..
   d. Child ..
   e. Any other, specify ..
8. Mention the type of garments preferred by you for your preschool boy/girl. Give reasons.

a. Garments	Homemade	Reasons
For boys		
Full shirt		
Bush shirt		
Half pant		
Baba suit		
Bell bottom		
Banians		
Any other		

<u>For girls</u>

Frock
Pantees
Maxi
Skirt
Blouse
Any other

b.	Garments	Purchased as readymade	Reasons

<u>For boys</u>

Full shirt
Bush shirt
Half pant
Baba suit
Bell bottom
Banians
Any other

<u>For girls</u>

Frock
Pantees
Maxi
Shirt
Blouse
Any other

c.	Garments	Tailormade	Reasons

<u>For boys</u>

Full shirt
Bush shirt
Half pant
Baba suit
Bell bottom
Banian
Any other

For girls

Frock

Pantees

Maxi

Skirt

Blouse

Any other

9. Mention the type of textures you prefer for your preschool boys'/girls' garments. Give reasons.

a. Texture	Preferred	Reasons
Superfine		
Fine		
Medium		
Coarse		
Shiny		
Silky		

b. Texture	Not preferred	Reasons
Superfine		
Fine		
Medium		
Coarse		
Shiny		
Silky		

10. a) What type of fabrics do you prefer for the different types of garments for your child?

Boy's wear

Fabric	Shirt varieties	Pant types	Baba suit	Baniens/ underwear	Any other
Cotton					
Poplin					
Cambric					
Lawn					

Two/two
Full voile
Organdie
Knit
Drill
Casement
Khadi
Handloom
Any other

Polyester

Terene
Terecot blend

Polyamide
Nylon

Silk

Art silk/Rayon
Acetate/Taffeta
Wool
Cots wool
Terywool
Stretchlan
Any other

b. Girls wear

Fabric Types	Frocks	Maxis	Skirts	Blouse	Under-garments	Any other
Cotton						
Poplin						
Cambric						
Lawn						
Two/two						
Full voile						
Organdie						

Knit
Drill
Casement
Khadi
Handloom
Any other

Polyester

Terycot (blend)

Nylon
Silk
Art silk
Rayon
Acetate/Taffeta
Wool
Cots wool
Terewool
Stretchlan
Any other

11. State if you have any special preference for any particular brand in selecting fabrics for preschoolers' wear.

Mafatlal

Bombay Dyeing

D.C.M.

Binny

Calico

Lakshmi

Cooptex

N.T.C.

Any other

12. Mention the colours mostly preferred by you for preschoolers' garments.

Boys' wear Girls' wear

13. Mention the intensity of colours preferred by you for preschoolers' garments. Give reasons, if any.

Garments	Bright	Light	Medium	Dull	Dark	Any other	Reasons if any
<u>Boys' wear</u>							
Shirts							
Pants							
Baba suit							
Any other							
<u>Girls' wear</u>							
Frock							
Maxi							
Skirt							
Blouse							
Any other							

14. Give your design preferences for preschool boys'/girls' dresses.

Garments	Plain	Floral/ Scenery	Motive/ Human/ Animals Birds	Geometric/ Stylysed/ Abstract	Check/ Stripes/ Dots	Any other
<u>For boys</u>						
Full shirt						
Bush shirt						

Half pants

Baba suit

Bell bottom

Banians

Any other

<u>For girls</u>

Frock

Pantees

Maxi

Skirt

Blouse

Any other

15. Mention the type of placket (Opening) preferred by you for preschool boys'/girls' garments. Give reasons.

	<u>Type of placket opening</u>						
Garments	Front	Back	Side	Shoulder	Whitout opening	Any other type	Reasons
<u>For boys</u>							
Full shirt							
Hush shirt							
Half pant							
Baba suit							
Bell bottom							
Banians							
Any other							

For girls

Frock

Pantees

Maxi

Skirt

Blouse

Any other

16. Indicate the type of fasteners preferred by you for preschool girls'/boys' garments.

Garments Numbers	Press Buttons 1	Eye lets 3	Bias loops 6	Metal Buttons 8	Hooks and Eyes 10	Any other
	Buttons and Buttonholes 2	Zippers 4	Nylon Buttons 7	Fancy buttons 9		
		Buckles 5				

For boys

Full shirt

Bush shirt

Half pants

Baba suit

Bell bottom

Baniens

Any other

For girls

Frock

Pantee

Maxi

Skirt

Blouse

Any other

17. Indicate the types of trimmings and decorations preferred by you for preschool boys'/girls' garments.

Trimmings & decorations	Boys' Wear	Girls' wear
Embroidery		
Applique		
Cut work		
Lace		
Dart		
Tucks		
Pleats		
Gathers		
Frills		
Pockets		
Bows		
Bias		
Cords		
Smocking		
Fancy buttons		
Ruffles		
Tassels		
Fringes		
Crochets		
Any other		

18. Mention the problems faced by you in the selection and maintenance of trimmings and decorations in preschoolers' dresses.

Trimmings & Decorations	Problems faced

19. Mention the factors which your child influences you in selecting clothing.

Type of garment

Style

Colour

Texture

Design

Placket

Trimmings & Decorations

Price

Quality

Any other

20. Indicate your satisfaction, problems, and suggestions if any, in improving preschoolers' clothing.

Satisfactions.

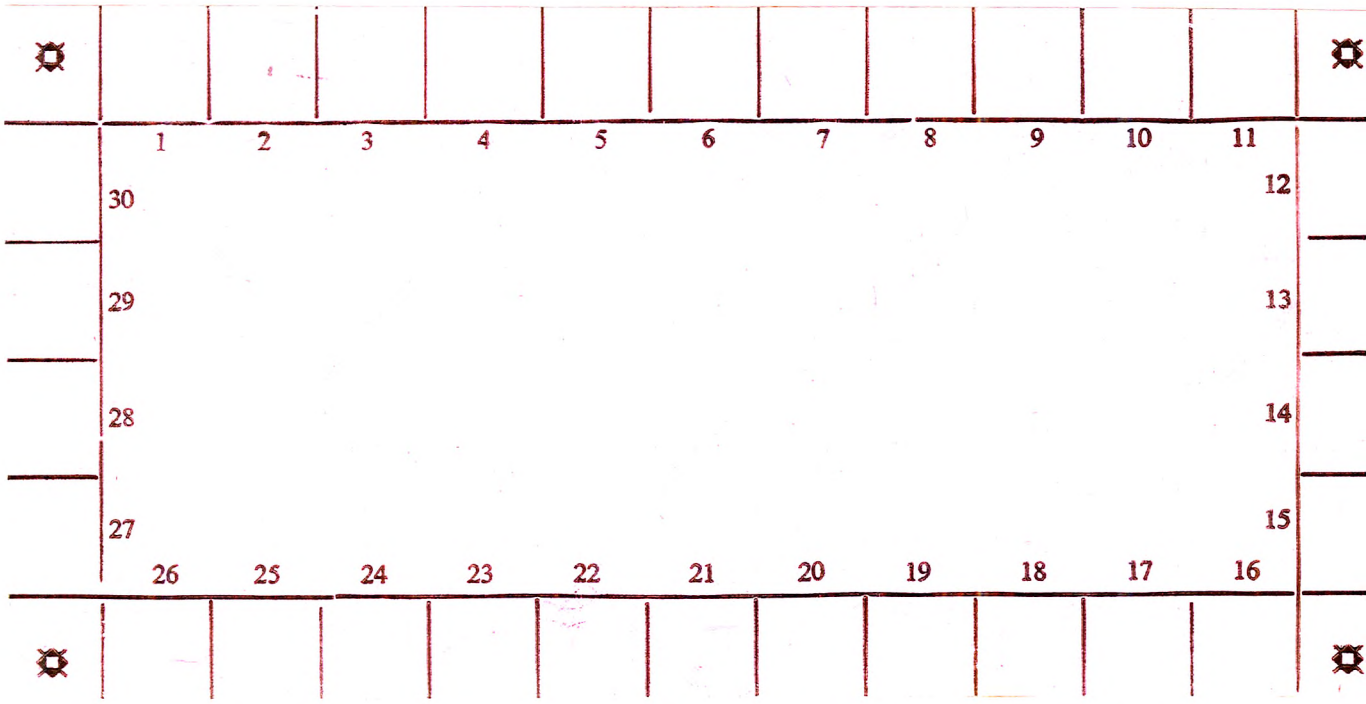
Problems

Suggestions for improvement

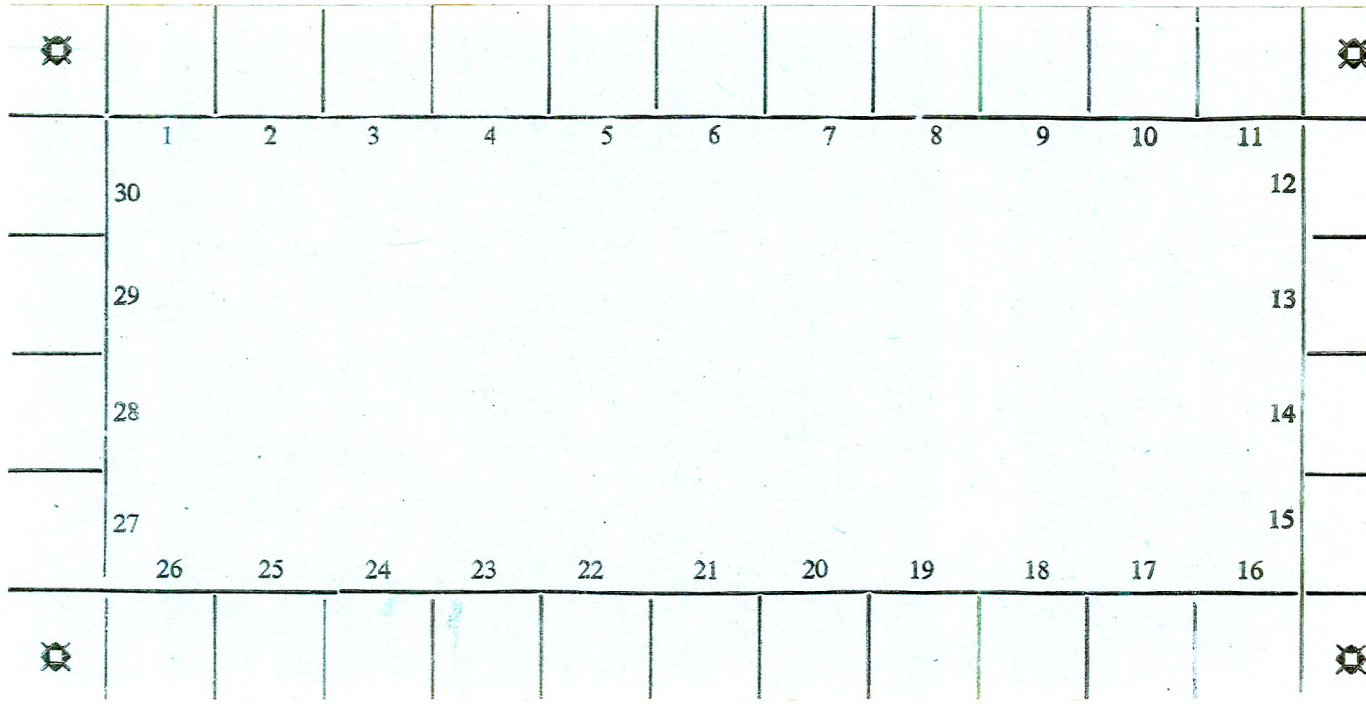
APPENDIX VI

CARDS USED FOR THE CLASSIFICATION OF BODY MEASUREMENTS FOR PRESCHOOLERS

Male Children



Female Children



APPENDIX VII

SAMPLE DRAFT OF CHOLI

Standard Measurements

Length	-	35 cm
Bust	-	80 cm (32")
Shoulder width		35 cm
Sleeve length		22.5 cm

Back

1-0 = Full length - belt width

2-0 = ¼4 Bust - 2.5 cms

3-2 = ¼ Bust + 2.5 cms

4 is squared down from 3

5-4 = 1 cm, Join 5-3

0-6 = ½ shoulder width + ½ cm

7 is squared down from 6

8-0 = 1/12 Bust

9-0 = 5 cms

Shape 8 & 9 for neck line

10-6 = 2.5 cms

Join 8 & 10, Take a dart of 1 cm

Join 10 & 3 for back armseye line

Front

11-3 = ¼ Bust + 2.5 cms

12 & 13 are squared from 11

14 - 12 = ½ shoulder width + 2 cms

15 - 11 = 14 to 12 - 1 cm

Join 14 and 15

16-12 = 1/12 Bust + 1 cm

17-14 = 2.5 cms

Join 16-17

18-15 = 2.5 cms

Shape from armseye 17, 18 and 3

19-12 = 16-12 + 2.5 cms

20-19 = 1 cm

Shape 16, 20 and 13 for front neck line

21-4 = 1 cm

Join 21-3

22-13 = 1 cm

Shape 21 & 22, Take two darts as shown

<u>Sleeve</u>

24-23 = Sleeve length + 1/2 cm

25-23 = 2.0 minus 1 cm

26 is squared from 24-25

27-25 = 1/2 of 23, 25 + 1/2 cm

Join 27-23

28-25 = 2.5 cms

Join 27-28

29 & 30 are 2 cms out from the line

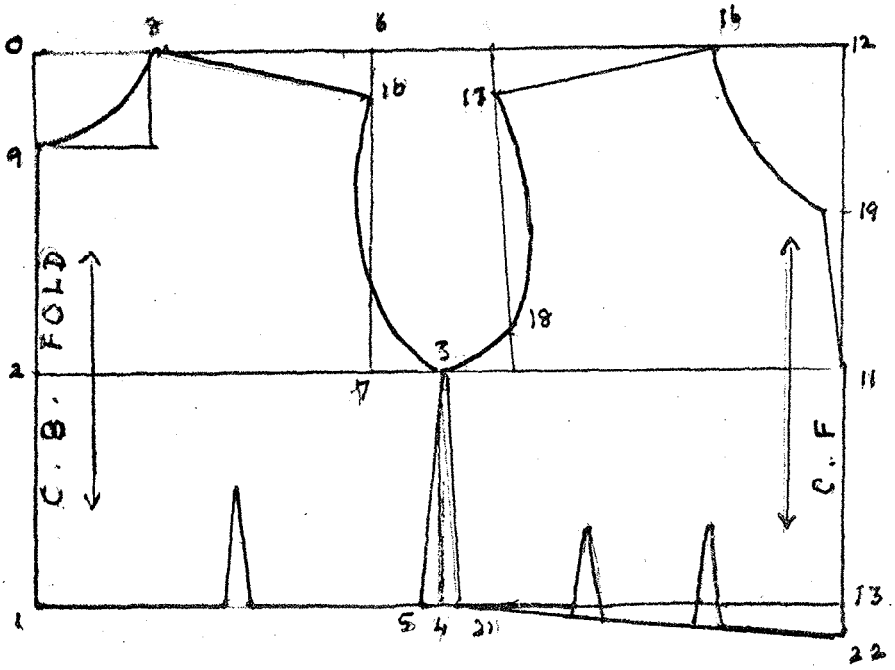
Shape the back 27,29 and 24

Shape the front 27, 30 and 24

Join the sleeve portion 27,30 24 towards 3, 18 and 17

(Figures are given in next page)

Source: (Juveker and Juveker, 1956).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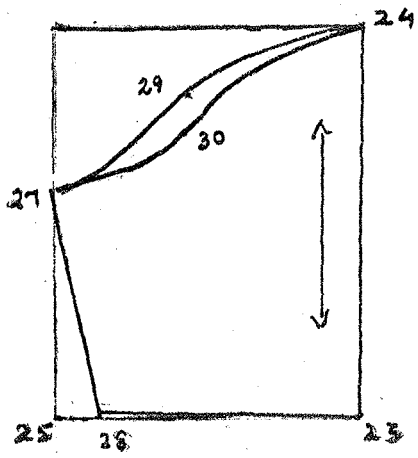
22


24
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30
27
25
26
23

APPENDIX VIII

RATING SCALE FOR EVALUATION OF FITTING OF CHOLI BY JUDGES

Name ..

Bust size ..

Aspect	Good	Fair	Poor
General appearance			
Position of darts			
Armyscye line			
Ease and comfort			
Any other			

APPENDIX IX

DRAFT FOR PETTICOAT - SIX GORE

Standard measurements for petticoats

1. Length from waist to ankle - 100 cms
2. Hip around fullest part of hip - 95 cms
3. Waist - around the normal waist line- 70 cms

Draw a rectangle ABCD

AE = 1/8 waist + 2½ cms for ease + 1¼ cms for seam

HJ = 1/8 Hip = 2½ cms for ease + 1¼ cms for seam

AH = 20 cms down from A on line AC

AC = Length of garment + 1 cm

AI = 1 cm down from A on line AC join I E for curve

CG = Skirt width = Twice AE

Mark CG on line CD

Join EJK

Measure IC

Mark 1 cm above G for curve EK = AC

IHC KJE forms pattern

Cut out pattern draft (Figure given in subsequent page)

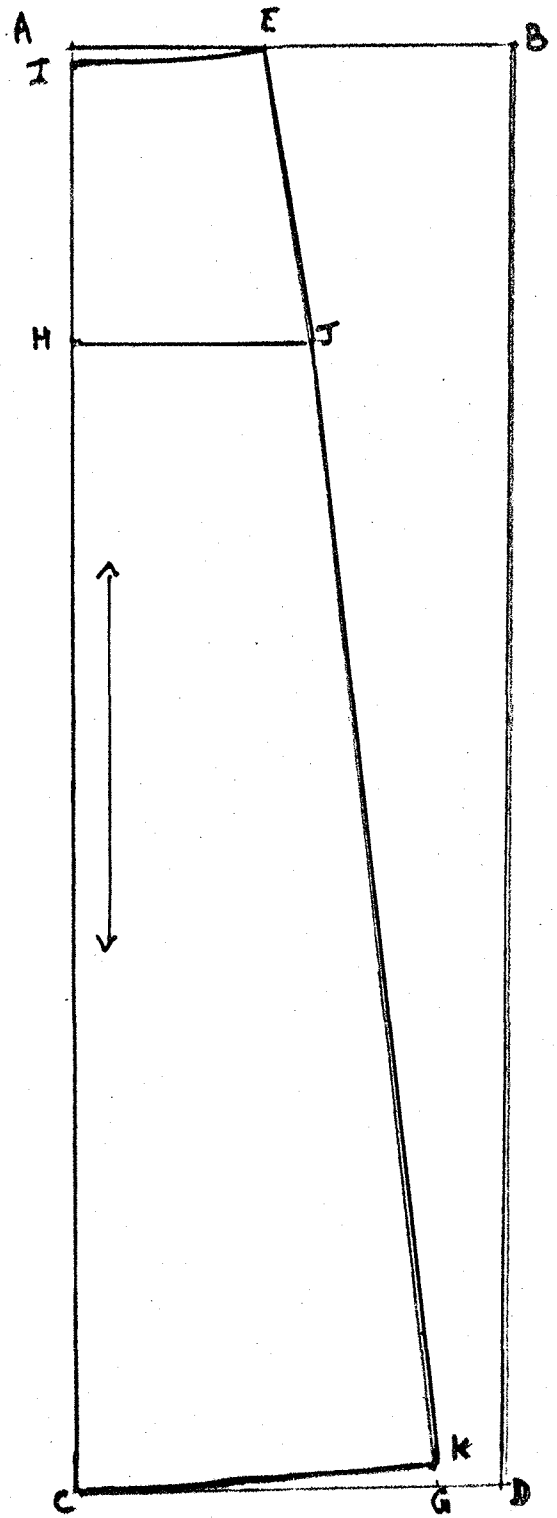
Fabric layout

Fold material width wise

Place pattern on fold of material, on lengthwise grain and mark outline for centre panel

Place paper pattern reversed on material and mark for two side panels

Repeat the above for obtaining 2 centre panels and 4 side panels


A
E
B
I
H
J
K
C
G
D

Construction aspects

Join centre panel to straight edge of side panel. Join the six pieces with 1/2 cm plain seam, leaving 15 cms between centre front panel and side panel for placket

Complete the placket with fasteners

Waistband = 10 cms + 2 cms for seam (Width)

Attach band on right side of garment, turn towards wrong side and complete the same. Insert tape for fastening. Make them at bottom 5 cms width

Frilled petticoats

In the case of single and double frilled petticoats, the length and skirtwidth of pattern are altered suitably depending on width of frills to be attached.

APPENDIX X

RATING SCALE FOR EVALUATION OF PETTICOATS BY JUDGES

Aspect	Good	Fair	Poor
1. General appearance			
2. Ease and comfort			
3. Drapability			
4. Size and Fit			
5. Construction aspects			
6. Any other			

APPENDIX XI

INTERVIEW SCHEDULE TO ELICIT INFORMATION FROM TAILORS REGARDING PRESCHOOLERS' GARMENTS

1. Name ..
2. Address ..
3. Average monthly income ..
4. Qualification ..

   Whether a diploma holder in tailoring

   Yes ☐ No ☐

5. Do you make children's garments?

   Yes ☐ No ☐

6. If yes, enlist the types of garments mostly stitched.

Garments for girls

- Frocks ☐
- Panties ☐
- Maxis ☐
- Skirt ☐
- Blouse ☐
- Any other

Garments for boys

- Baba suit ☐
- Full shirt ☐
- Bush shirt ☐
- Half pant ☐
- Bell bottom ☐
- Any other

7. List out the sources from which you get ideas for designs.

a. Pattern books ▱

b. Designs from customers ▱

c. Imitating readymades ▱

d. Magazines ▱

e. Movies ▱

f. Exhibitions ▱

g. Any other source

8. Do you get orders for childrens' wear from regular customers?

Yes ▱ No ▱

9. Mention the methods adopted for making the garments

Garments	Measure-ments	Model garments	Instruc-tions	Commercial patterns	Blocks
Frock					
Panty					
Maxis					
Skirts					
Blouse					
Full shirt					
Bush shirt					
Half pant					
Bell bottom					
Baba suits					

10. Do you introduce self help features in the garments?

Yes ☐ No ☐

If yes, indicate the self help features

a. Front opening ☐

b. Pockets ☐

c. Trimmings & Decorations ☐

d. Any other

APPENDIX XII

PROFORMA TO ELICIT INFORMATION FROM SHOPKEEPERS ON READYMADE GARMENTS AVAILABLE AND MOSTLY SOLD

Dresses available	Mostly sold dresses	Brand/ make	Fabric colour	Design/ texture	Price level	Sizes available	Label information
For boys							
For girls							

TRIMMINGS & DECORATIONS

	Embroidery/ Appliqué/ smoking	Laces	Darts/ Tucks/ Pleats/ Gathers	Pockets	Fastëners	Braids/ Tassels	Ruffles
Dresses for boys							
Dresses for girls							

B. **Fabrics available**

Boy's wear	Poplin	2/2	Cambric	Drill/ Khaki	Terycot/ Polyester	Stretchlan	Cotton/ Knit	Any other
Girl's wear	Poplin	2/2	Cambric	Voile	Terycot	Polyester Crepe	Knit	Any other

Any problems faced by shopkeepers

APPENDIX XIII

FABRIC VARIETIES AVAILABLE IN READYMADES FOR PRESCHOOLERS

Garment	Poplin	Two/Two	Cambric	Drill	Terecot	Polyester	Strechlan	Cotton knitted
Baba suit	10	3	..	..	8	8	5	..
Bush shirt	10	2	..	..	6	8	..	..
Full shirt	10	4	..	..	4	8	..	..
Half pant	..	..	..	10	10		7.	..
Frocks	10	10	10	..	10	8	..	2
Bellbottom	7	..	..	..	7	6	4	..
Top	7	7	7	..	6	6	4	2
Maxi	9	8	6	..	4	5	..	..
Banian	..	..	..	..	..	..	..	8

Number of shops: 10

APPENDIX XIV

SCHEDULE FOR OBSERVATION OF PRESCHOOL BOYS'/ CONTUME FOR SEVEN DAYS GIRLS'

Name of costume (For boys)

Class	Total No. of boys	No. present	Bush shirt and half pant	Baba suit	Full shirt & Half pant	Full Pant & Bush shirt	Full shirt and Full pant	Any other

Name of costume (For girls)

Class	Total No. of girls	No present	Frock	Maxi	Full skirt with top and blouse	Half skirt with top and blouse	Skirt & blouse	Any other

APPENDIX XV-A

OBSERVATION OF PRESCHOOL BOYS' COSTUME

Total No.of Boys: 50

No.of boys wearing the particular costume

Days	Total No. of boys present	Bush shirt & Half pant	Baba suit	Full shirt & Half pant	Bush shirt & full pant	Full shirt & full pant
1	50	21	7	6	7	7
2	50	17	13	7	7	5
3	50	15	17	10	4	4
4	50	15	15	9	7	5
5	50	21	15	9	4	..
6	50	25	13	10	4	2
7	50	20	15	6	4	4
Total	350	134	95	57	37	27
%age	100	38.3	27.1	16.3	10.6	7.7

APPENDIX XV-B

OBSERVATION OF PRESCHOOL GIRL'S COSTUME

Total No.of girls: 50

No.of girls wearing the particular costume

Days	Total girls	No.of present	No.absent	Frock	Maxi	Full skirt with top & blouse	Half skirt with top & blouse	Skirt & blouse
1	50		..	37	4	2	4	3
2	48		2	33	5	3	2	5
3	47		3	30	6	5	4	2
4	46		4	33	2	1	8	2
5	48		2	30	5	3	4	6
6	48		2	42	2	2	2	..
7	49		1	35	4	5	2	3
Total	336		14	240	28	21	26	21
%age	100		4	71.5	8.3	6.3	7.7	6.3

APPENDIX XXI

INSTRUCTIONS FOR MAKING DRAFT FROCKS

Standard measurements

Bust = 53 cm

Waist = 52 cm

Waist length = 26 cm

Shoulder width = 25 cm

Arm round = 17 cm

Sleeve length = 12 cm

Front

0-1 waist length

0-2 ¼ chest

3-2 ¼ chest + 3-3/4 cm

4 = Square down from 3

5-4 = 1¼ cm Join 3 to 5

6-0 = 1/12 Chest + 1¼ cm

7-0 = 1/12 chest + 2½ cm

8-0 = ½ shoulder width + ½ cm

9 = Square down from 8

10 to 8 = 2 cm Join 10 to 6

11 to 9 = ⅓ of 10-9 and 11-12 = 1¼ cm

Shape the style 10-12-3 for front as shown in the draft

Back

0-13 = 2½ cm

Join 13-6 with a curve line

9-14 = 1½ cm

Shape the acye for back 10-14-3 as shown in draft

Sleeve

Sleeve length = 12 cm

Sleeve width = ¼ chest-1¼ cm

Round arm = ½ round arm + 1½ cm

Fold the paper in half on the long side keeping the fold on the left side and mark the corners 1-2-3-4 as shown

3-5 = ⅟12 chest + ½ cm

Join 1-5 with a straight line

Mark 6 and 7 at equal space

8 is 1 cm above from 7

9 is ½ of 5-6 and 10 is ½ cm from 9 join 1-8-6-10-5

for back sleeve curve, 11 is ¼ cm above from 7

12 is half of 6 and 7

13 is ½ cm below 10

Join 1-11-12-13-5 with a smooth curve for the front curve or the sleeve cap

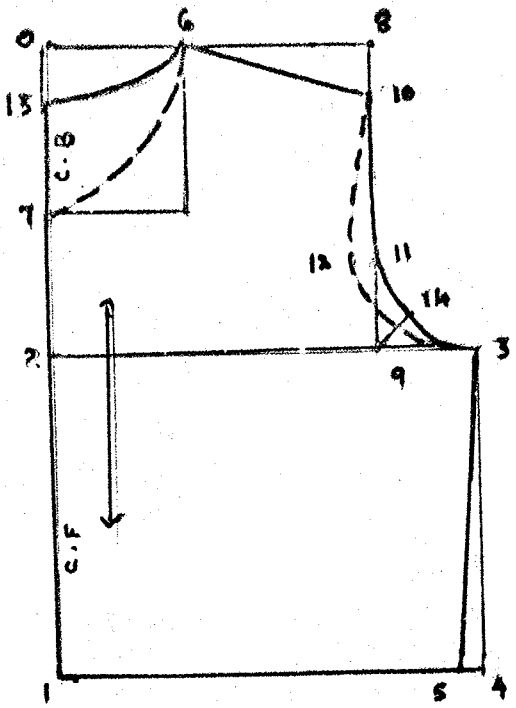
2-14 = ½ round arm + 1½ cm

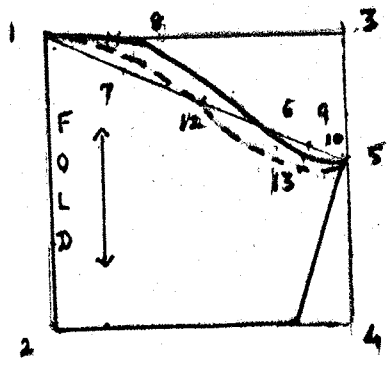
Cut on double fold

Cut 1-8-6-10-5-14

Open sleeve and cut 1-11-12-13-5 through one thickness only

(Figures given in next page)


0
6
8
15
10
C.B
7
12
11
14
2
3
9
C.F
1
5
4


1
8
3
7
6
9
12
10
FOLD
5
13
2
4

APPENDIX XVII

DRAFT INSTRUCTIONS FOR PRESCHOOL BOYS' SHIRT

Standard Measurements

1. Bust = 52 cms
2. Length of shirt = 38 cms + 2 cm hem (or as desired)
   (Calculated from waist length and waist to thigh measures)
3. Shoulder width = 25 cm
4. Neck = 26 cm
5. Sleeve length = 10 cms + 2 cms hem
   (Calculated from shoulder to elbow measure)

Length = AC = (or desired length)

Width = ¼ chest + 3 cms

AE = ⅙ neck

AF = ⅙ neck + ½ cm

AG = ½ shoulder

GI = ¼ chest

GH = 1½ cms down G

GI = BJ

IK = 3 cms KK = ½ cm

Cut I at 45 ° angle, measure 2 cms for back armseye curve

JK 'H = Front armseye line

JK H = Back armseye line

L = ½ JD' L'L = ½ cm for shape

E'C' = 1 cm from EC Line, forming front fold and Centre Back fold

Curve E'EF, H' A' F for neck lines

Sleeve

AC = Length of sleeve + 2 cms for hem

AB = Sleeve width = ¼ chest

Fold paper for BD

AA' = ⅛ chest minus ½ cm

Join A' B

Divide A'B into halves and quarters

OO' = ½ cm

MM' = ½ cm

NN' = ½ cm

Draw curves for front A' M' O N' B and back A' MO' N' B for armseye lines

PP' = ½ cm Join A' P' C

Collar

Draw ABCD a rectangle

AB = ¼ chest + 1 cm

AC = ⅙ chest - ½ cm

BB' = 1½ cms down

CC' = 1 cm

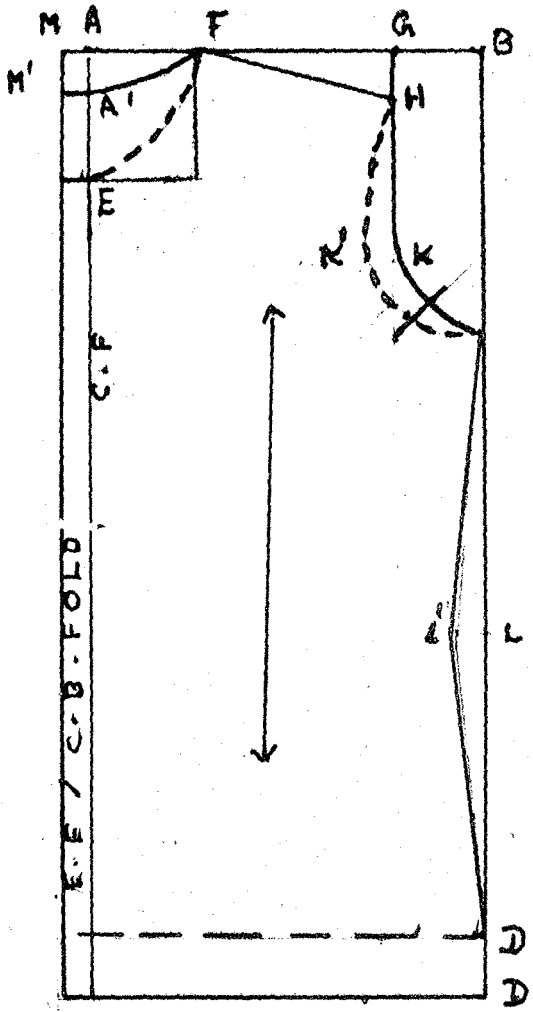
Extend line CD, mark 3 cms from D, Q

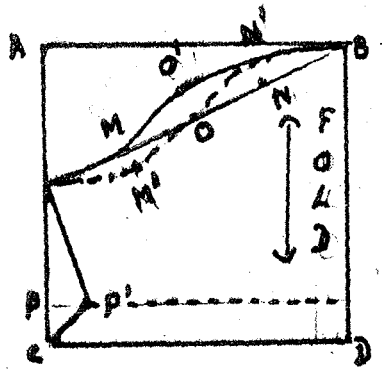
QQ' = 1 cm

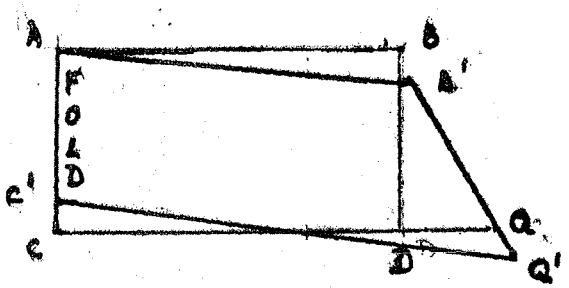
Join C' Q' with mild curve

Note: 1 cm stitching allowance can be included for pattern outline leaving folds.

(Figures given in next page)


M
A
F
G
B
M'
A'
H
E
K'
K
C.F.
C.B.FOLD
L'
L
D'
D


A
N'
B
O'
M
O
N
M'
FOLD
P
P'
C
D


A
B
A'
FOLD
C'
C
D
Q
Q'

APPENDIX XVIII

DRAFT INSTRUCTIONS FOR PRESCHOOL BOYS SHORTS

Standard Measurements

Waist = 52 cms

Hip = 55 cms

Length = 24 cms

Crotch depth = 15 cms

(Length calculated from waist to knee and thigh measures)

Front

AB = ¼ hip + 1 cm

AF = Length - 3 cms + hem

BC = ⅓ hip - 3 cms equals almost crotch depth

Measure BC on line B and mark C

CD = 4 cms

E = 1 cm above C, draw curve for front

G = Mid point of AF

GG' = ½ cm, draw mild curve

HH' 1 cm for shape

Include 1 cm seam allowance for pattern outline

Back

AB = ¼ hip + 2 cms

AF = Length - 3 cms + hem

Place front pattern on AB line coinciding with A

Mark D. From D measure 4 cms and mark D'

BC = ⅓ hip - 3 cms equals almost crotch depth

From B of back pattern measure BC on line and mark C

CC' = 1 cm on 45° angle = E, Draw curve for Back

G = Mid point of AP

GG' = ½ cm ≠ draw mild curve

Bottom = HH' ≠ 1 cm for shape

BB' = ½ cm

AP = 8 cms PT = 6 cms

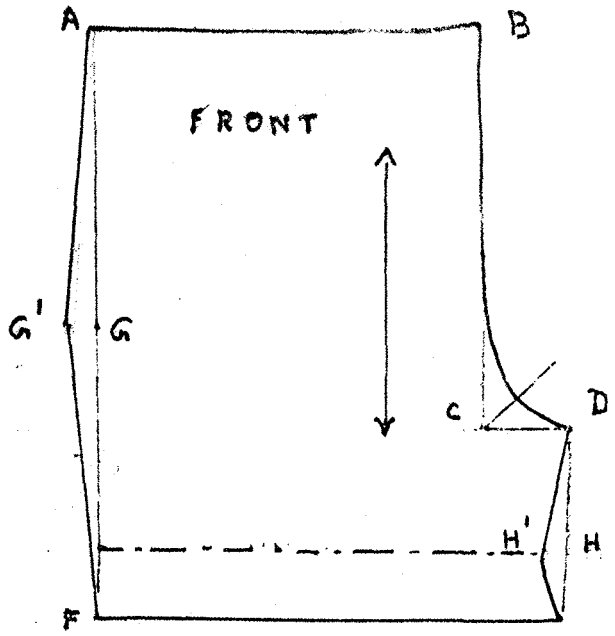
Draw dart ½ cm wide

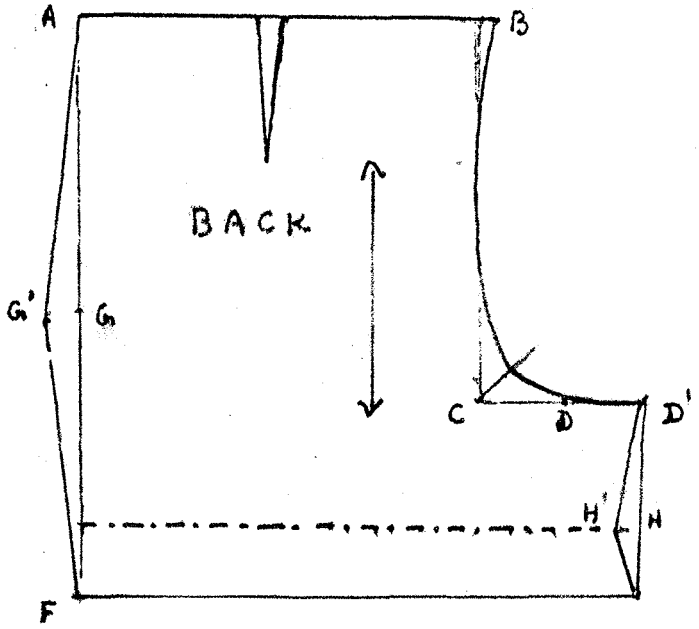
½ Band length = ½ Front width + ½ Back width + 5 cms

Band width = 5 cms for shorts

Note: Include 1 cm seam allowance for pattern outline

(Figure given in next page)


A
B
FRONT
G'
G
C
D
H'
H
F


A
B
BACK
G'
G
C
D
D'
H'
H
F


BAND

APPENDIX XIX

RATING SCALE FOR EVALUATION OF FROCKS, BUSH SHIRTS AND HALF PANTS BY JUDGES

Name of Judge ..

Aspect	Good	Fair	Poor
1. General appearance			
2. Colour combination			
3. Fabric texture			
4. Fabric design			
5. Dress design & style			
6. Size, fit and comfort			
7. Self help features			
8. Construction details			
9. Any other			

APPENDIX XX

INTERVIEW SCHEDULE TO ELICIT INFORMATION FROM RURAL WOMEN REGARDING PRACTICES AND PROBLEMS IN CLOTHING SELECTION

1. Name of village ..
2. Name of interviewee/ home maker ..
3. Name of head of family ..

   Address ..
4. Caste/Religion ..
5. Family type .. Joint/Nuclear
6. Family background ..

Name of family member	Relationship to head	Age	Educational level	Occupation	Income/ Month

Other sources of income ..

- Rent ..
- Interest ..
- Subsidiary occupations
- Any other ..
- Total family income ..

7. Expenditure pattern

S.No.	Item	Rs/month	Percentage of family income
1.	Food		
2.	Clothing		
3.	Shelter		
4.	Education		
5.	Recreation		
6.	Medicine		
7.	Transport		
8.	Savings		
9.	Miscellaneous		
10.	Any other		

8. Are you able to balance your income and expenditure?

Yes No

9. Do you allot money for family clothing?

Yes No

If yes, how much?

Per month Rs. Per year Rs.

10. When do you purchase the clothing?

1. During festival occasions
   a. Deepavali
   b. Pongal
   c. Christmas
2. Annually
3. Half yearly

4. At the time schools reopen

5. Any other time, specify

11. How do you make the purchase?

Credit basis

Cash basis

Instalment basis

12. Who selects and purchases the clothing items?

Head of family

Homemaker

Individual member

Any other

13. Give the list of clothing items the family members Possess.

<u>Clothing items possessed</u>

Cotton

Rayon

Silk

Nylon

Polyester

Terycot

Any other

14. What factors influence your clothing choice?

Price

Quality

Suitability

Colour

Design

Texture

Comfort

Easy care properties

Any other

15. Where do you purchase clothing?

Give reasons

Place of purchase	Reasons

16. What factors influence your clothing expenditure?

17. What problems are faced by you in purchasing clothing fabrics?

18. What type of garments do you prefer?

Readymade

Tailormade

Homemade

19. Give details of readymade garments purchased by you

Garment	Rate	Number	Brand

20. Give details of garments given to tailor

Garment	Rate	No. given

21. Do you face any problems in readymade garments?

Yes No

If so, state the ~~reasons~~ problems.

22. Do you have any problems in tailormade garments?

Yes No

If yes, state the problems

23. Do you possess a sewing machine?

Yes No

If yes, do you make garments?

Yes No

24. Do you earn an income through crafts?

If so, indicate the same.

25. Are you aware of Janata saris, dhotis and controlled cloth varieties offered for sales?

Yes No

If yes, do you purchase any items?

Yes No Reasons

26. Facilities available in village

Familiy	Available Yes	Available No	Participating	Not participating
Mahalir Manram				
Balwadi				
School				
Youth club				
Cooperative				
NAEP				
Any other				
Reasons				

APPENDIX XXI

MAJOR FINDINGS OF THE RURAL RESEARCH

The findings of the research conducted at Karamadai Block, Coimbatore district are presented under the following heads:

1. Family background
2. Expenditure pattern
3. Clothing purchasing habits
4. Participation in welfare programmes

1. Family background

In the 250 families selected as samples for the study 185 belonged to low, 45 to middle and 20 to high income levels.

Agriculture formed the main occupation for the majority of the heads of families followed by daily wage earning, in low income level. Farming, combined with homemaking was the main job of homemakers.

The low income group was characterised with a low level of leteracy. Seventy per cent of the home makers were illiterates and 50 per cent of heads of families were literates. With increase in income levels the literacy level also increased.

2. Expenditure pattern

Around 70 per cent were nuclear families. Around 70-80 per cent of the income was spent on food by more than 50 per cent of low income families. With an increase in income, the amount spent on food decreased.

Six to fiteen per cent of the family income was spent on clothing by 64 per cent of low, 60 per cent of the middle and 75 per cent of the high income families.

More than 80 per cent of the families had their own shelter. As regards education 70 per cent of the families in low, 58 per cent in middle and 30 per cent in high income groups did not incur any expenditure.

More than 70 per cent of the families in the three income groups spent around 5 per cent of their family income on recreation, mainly on movies.

Around 50 per cent and 25 per cent of the families in the three income groups incurred a medical expenditure of 1-5 per cent and 6-10 per cent of their income respectively. Almost all the families spent within 5 per cent of their income on transportation. Seventy one per cent of low, 45 per cent of middle and 10 per cent of the high income families did not save any money. Sixty per cent of the families incurred some type of miscellaneous expenditure. Fifty per cent could balance their income with expenditure.

3. Clothing purchasing habits

Clothing purchases were mostly done on cash basis. Purchases were done in local and mobile shops, supermarket and Shandies, both by homemakers and husbands, mostly during Diwali and Pongal. Price and quality influenced their choice of clothing.

The wardrobe size increased with an increase in income. Silk and synthetics were possessed by middle and high income families, while low income families possessed cotton.

Standard cloth varieties were not purchased by 75 per cent of the families due to lack of awareness and non-availability. Clothing items were mostly stitched by tailors, Banians alone were purchased as readymades. Home sewing was not popular in rural areas.

The problems in clothing choice included, lack of serviceability in fabrics, high price, and confusing terminologies used in shops for fabrics.

4. Participation in Welfare programmes

Around 70 per cent were not willing to participate in any educational programmes, due to lack of interest and facility. Even though 90 per cent were members in balwadis and schools, 65 per cent in mahalir manrams and cooperatives

and 45 per cent in youth clubs, their participation in any of these activities was low. More than 85 per cent of the families had no subsidiary occupations.

APPENDIX XXII

EQUIPMENT REQUIRED FOR A TAILORING UNIT

Total capital amount required for the installation of non-recurring and recurring expenditure is Rs.10,000 the details of which are given below.

S.No.	Item	Rate	No	Cost in Rs.
1.	Sewing machine	800	6	4800.00
2.	Godrej Plain storewell	1500	1	1500.00
3.	Cutting table (175/100/75 cm)	800	1	800.00
4.	Chairs	90	8	720.00
5.	Electric iron	210	1	210.00
6.	Ironing table	250	1	250.00
7.	Shears	20	6	120.00
8.	Scissors	10	6	60.00
9.	Bobbin case	6.50	12	75.00
10.	Bobbin	0.25	40	10.00
11.	Embroidery items			
	Scissors	5.00	1	5.00
	Plate	5.00	1	5.00
	Frame	5.00	1	5.00
12.	Screw drivers			
	Big	3.00	2	6.00
	Small	2.00	2	4.00
13.	Spanner	25.00	1	25.00

S.No.	Item	Rate	No	Cost in Rs.
14.	Scales			
	Metre scales	6.25	4	25.00
	½ metre scales	4.00	4	16.00
	Foot ruler	2.50	8	20.00
15.	Tape measure	2.50	8	20.00
16.	Tracing wheel	3.00	8	24.00
	Total			8,700.00
Non-consumable items				
1.	Unbleached muslin Rs.6/metre (100 metres)			600.00
2.	Oil and belt			50.00
3.	Stationery items			65.00
4.	Linings and interfacings			100.00
5.	Trimmings & Decorations			120.00
6.	Brown paper and tracing paper			115.00
7.	Fasteners of different types			25.00
8.	Machine and ordinary needles			25.00
9.	White and colour threads			100.00
10.	Miscellaneous items			100.00
	Total			1300.00
	Expenditure			
	Non-recurring			Rs.8700.00
	Recurring			Rs.1300.00
	Total			Rs.10000.00

APPENDIX XXIII

CURRICULUM ON GARMENT CONSTRUCTION

30 Hrs/week: One year

Objectives

To enable students to

a) Learn basic techniques dress making

b) Develop skills in garment construction

1. Body measurements. How to take them.
2. Pattern making by simple drafting and tailor methods.
3. Knowledge of equipment for clothing construction- assembling of essential tools for a sewing kit- tools for marking, cutting and stitching.
4. Sewing machine - parts, operation, use and care
5. Electric iron -operation and care.
6. Knowledge of basic stitches and seams.
7. Plackets of different types.
8. Application of fasteners of different types.
9. Introducing fullness in garments.
10. Neck finishes - application of bias.
11. Simple yokes, collars, and sleeve types.
12. Learning to construct:

    Table and bed covers, pillow cases, cushion covers

    Sari petticoat, choli, bodice, Girls' full skirt

    and blouse, Frocks, panties, knickers, maxis.

    Boys' shirts, pants, phyjamas, bell bottons.

    Infants, toddlers and preschoolers' wear

    Final pressing of garments

APPENDIX XXIV

PROFORMA TO EVALUATE THE CONSTRUCTED GARMENTS BY JUDGES

A Petticoats — **Four gore and six gore**

S.No.	Name of candidate	Seam	Hem	Waist Band	Placket	Neatness & General appearance	Total
		20	20	20	20	20	100 marks

B. Blouse/Choli

S.No.	Name of candidate	Seam	Hem	Placket	Yoke	Neck finish	Sleeve attach-ment	Waist band	Darts	Fast-eners	Neat-ness/ General appearance	Total 100 Marks
		10	10	10	10	10	10	10	10	10	10	

APPENDIX XXV

A RATING SCALE FOR SELF ASSESSMENT OF CANDIDATES DURING TRAINING PERIOD

1. Name ..

2. Age ..

3. Percentage of attendance in sewing class ..

4. Whether I knew sewing before joining the class.

   Yes No

5. If yes, to what extent did I know?

   Knew very well
   Knew well enough to stitch
   Knew fairly well
   Did not know so well
   Did not know at all

6. Whether I have been a regular student

   Yes No

7. Whether sewing class has been beneficial?

   Yes No

8. If yes, state to what extent it has been beneficial.

   Very beneficial

   Beneficial

   Fairly beneficial

   Not so beneficial

   Not at all beneficial

9. After joining the class, garments that I can make confidently now are:

Panty

Knicker

Petticoat

Blouse

Choli

Frocks

Skirt

Half pant

Any other

10. How far have I developed my skill and made progress?

Can stitch very well ..

Can stitch well enough..

Can stitch fairly well..

Cannot stitch so well ..

Cannot stitch at all ..

11. Whether the sewing class has been interesting to the candidate?

I had no interest in sewing before joining the class.

I was interested in sewing even before joining the class.

I became interested after joining the sewing class.

I am not interested even after joining the sewing class.

12. Any other remarks/comments.

APPENDIX XXVI

RATING SCALE TO ASSESS PERFORMANCE OF PETTICOAT BY CONSUMERS

1. Name of consumer ..

2. Details of petticoats purchased ..

Type	White	Coloured	Size	Number	Price paid/ item
Plain					
Single-frilled					
Double frilled					

3. Tick below ( )

	Very good	Good	Fairly good	Not so good	Poor
a. General appearance					
b. Fitting					
Height					
Hip					
Waist					
Bottom					
c. Stitching aspects					
d. Choice of fabric (in relation to price paid)					
Durability					
Colour-fastness					
washability					

No shrinkage

e. Drapability

f. Comfort in wearing

- -

4. Are you satisfied with the purchase made?

Yes No

Reasons:

5. Problems faced in use and maintenance

6. Suggestions for improvement of the petticoat

7. Any other comments, indicate

APPENDIX XXVII-A

FAMILY INCOME AND CLOTHING EXPENDITURE IN LOW INCOME FAMILIES

Income/Year	Clothing Expenditure Number of families							
	50-150	150-250	250-350	350-450	450-550	550-650	1050-1150	Total
1000-1500	..	1	..	..	..	..	..	1
1500-2000	2	3	1	..	..	..	..	6
2000-2500	3	11	8	1	..	..	..	23
2500-3000	..	..	..	..	1	..	..	1
3000-3500	1	5	3	1	..	..	..	10
3500-4000	..	6.	5.	—	2	1	..	14
4000-4500	..	..	..	1	2	..	..	3
4500-5000	..	1	4	1	2	..	6	14
5000-5500	..	..	1	..	..	..	..	1
5500-6000	..	..	..	..	..	..	..	..
6000-6500	..	..	..	..	2	..	..	2
Total	6	27	22	4	9	1	6	75

Value of r = 0.55)

Note: From 650-750 to 950-1050 No respondents.

APPENDIX XXVII-B

FAMILY CLOTHING AND PRESCHOOLERS CLOTHING EXPENDITURE OF LOW INCOME FAMILIES

Family Clothing Expenditure/year	Preschoolers' clothing expenditure						
	0-50	50-100	100-150	150-200	200-250	250-300	Total
	No. of families						
50-150	11	2	..	..	..	..	13
150-250	17	4	1	..	..	..	22
250-350	10	9	1	..	..	..	20
350-450	1	2	..	..	1	..	4
450-550	6	3	..	..	..	..	9
550-650	..	..	..	1	..	..	1
650-750	..	..	..	..	..	..	0
750-850	..	..	..	..	..	..	0
850-950	..	..	..	..	..	..	0
950-1050	..	4	1	..	..	1	6
Total	45	24	3	1	1	1	75

(Value of r = 0.48)

APPENDIX XXVII-C

INCOME AND PRESCHOOLERS' CLOTHING EXPENDITURE IN LOW INCOME FAMILIES

Income/ year	Preschoolers' clothing expenditure							
	0-50	50-100	100-150	150-200	200-250	250-300	300-350	Total
	Number of families							
1000-1500	2	..	..	..	..	..	..	2
1500-2000	2	2	1	..	..	..	..	5
2000-2500	9	10	4	..	..	..	..	23
2500-3000	..	..	1	..	..	..	..	1
3000-3500	2	4	3	1	..	..	..	10
3500-4000	..	9	4	..	1	..	..	14
4000-4500	..	1	1	..	..	1	..	3
4500-5000	2	5	4	2	..	..	1	14
5000-5500	..	1	..	..	..	..	..	1
5500-6000	..	..	..	..	..	..	..	0
6000-6500	..	2	..	..	..	..	..	2
Total	17	34	18	3	1	1	1	75

(Value of r = 0.35)

APPENDIX XXVII-D

INCOME AND CLOTHING EXPENDITURE IN MIDDLE INCOME FAMILIES

Income/year	Clothing expenditure								
	250-400	400-550	550-700	700-850	1000-1150	1150-1300	1450-1600	1900-2050	Total
	No. of families								
3500-4500	4	3	..	1	..	..	..	..	8
4500-5500	3	3	1	..	..	..	..	..	7
5500-6500	3	2	..	1	1	..	..	..	7
6500-7500	1	1	1	..	1	1	..	..	5
7500-8500	4	5	..	..	1	..	1	1	12
8500-9500	..	2	..	1	1	1	..	..	5
9500-10500	1	3	1	1	..	..	1	..	7
10500-11500	..	..	2	..	1	..	..	1	4
11500-12500	..	2	..	..	..	..	..	..	2
12500-13500	..	..	..	..	..	..	..	..	0
13500-14500	..	..	..	1	..	..	..	..	1
14500-15500	..	..	..	..	..	..	..	..	0
15500-16500	..	..	..	..	..	..	..	..	0
16500-17500	..	..	..	..	..	..	..	..	0
17500-18500	..	..	..	..	1	..	..	1	2
Total	16	21	5	5	6	2	2	3	60

(Value of r = 0.45)

Note: 850-100, 1300-1450: 1600-1750; 1750-1900 No respondents

APPENDIX XXVII-E

FAMILY CLOTHING AND PRESCHOOLERS' CLOTHING EXPENDITURE IN MIDDLE INCOME FAMILIES

Family Clothing Expenditure/ year	Preschoolers clothing expenditure								
	50-100	100-150	150-200	200-250	250-300	300-350	350-400	450-500	Total
	Number of families								
250-400	18	1	2	..	..	..	..	..	21
400-550	10	4	1	..	..	..	..	..	15
550-700	3	..	2	..	..	1	..	..	6
700-850	3	2	..	..	..	..	..	..	5
850-1000	2	..	1	..	1	..	1	..	5
1000-1150	1	..	..	..	..	..	..	..	1
1150-1300	..	1	..	1	..	..	..	..	2
1300-1450	..	..	..	..	..	..	..	..	0
1450-1600	..	..	1	..	1	..	..	..	2
1600-1750	..	..	..	..	..	..	..	..	0
1750-1900	..	..	..	..	..	..	..	..	0
1900-2050	..	..	1	..	..	..	..	2	3
Total	37	8	8	1	2	1	1	2	60

(Value of r = 0.65)

Note: 400-450 No respondents

APPENDIX XXVII-F

INCOME AND PRESCHOOLERS' CLOTHING EXPENDITURE IN MIDDLE INCOME FAMILIES

Income/year	Clothing expenditure								
	50-100	100-150	150-200	200-250	300-350	350-400	400-450	500-550	Total
	No. of families								
3500-4500	4	4	..	..	..	..	..	..	8
4500-5500	3	2	1	1	..	..	..	..	7
5500-6500	2	2	2	1	..	..	..	..	7
6500-7500	1	..	..	2	1	1	..	..	5
7500-8500	3	4	2	1	1	..	..	1	12
8500-9500	1	2	1	1	..	..	..	..	5
9500-10500	2	3	..	2	..	..	..	..	7
10500-11500	2	..	..	1	..	..	1	..	4
11500-12500	1	1	..	..	..	..	..	..	2
12500-13500	..	..	..	..	..	..	..	..	0
13500-14500	..	1	..	..	..	..	..	..	1
14500-15500	..	..	..	..	..	..	..	..	0
15500-16500	..	..	..	..	..	..	..	..	0
16500-17500	..	..	..	..	..	..	..	..	0
17500-18500	..	1	..	..	..	..	..	1	2
Total	19	20	6	9	2	1	1	2	60

(Value of r = 0.27)

Note: 250-300; 450-500 No respondents

APPENDIX XXVII-G

INCOME AND FAMILY CLOTHING EXPENDITURE IN HIGH INCOME FAMILIES

Income/year	Clothing expenditure								
	500-750	750-1000	1000-1250	1250-1500	1500-1750	1750-2000	2250-2500	2500-2750	Total
	No.of families								
8500-10500	23	4	..	1	..	..	..	..	28
10500-12500	25	8	1	1	1	..	..	1	37
12500-14500	7	3	..	..	..	..	..	..	10
14500-16500	8	8	2	3	..	..	..	..	21
16500-18500	4	7	4	4	1	..	..	..	20
18500-20500	5	2	..	2	1	1	..	1	12
20500-22500	..	2	..	1	..	..	..	..	3
22500-24500	7	4	1	1	2	..	..	1	16
24500-26500	..	2	..	..	..	..	..	..	2
26500-28500	..	..	..	..	..	..	..	..	0
28500-30500	3	4	..	..	2	1	..	..	10
30500-32500	..	..	..	1	..	..	1	..	2
32500-34500	..	1	..	..	..	..	..	..	1
34500-36500	1	1	..	1	..	..	..	..	3
Total	83	46	8	15	7	2	1	3	165

(Value of r = 0.33)

Note: 2000-2250 No respondents

APPENDIX XXVII-H

FAMILY CLOTHING AND PRESCHOOLERS CLOTHING EXPENDITURE OF HIGH INCOME FAMILIES

Clothing Expenditure/ year	Preschoolers' clothing expenditure								
	100-200	200-300	300-400	400-500	500-600	600-700	800-900	900-1000	Total
	No.of families								
500-750	45	7	1	..	..	..	..	..	53
750-1000	25	16	4	4	1	..	..	..	50
1000-1250	1	6	2	2	..	..	..	..	11
1250-1500	10	6	2	4	2	1	..	..	25
1500-1750	..	3	..	3	..	..	..	..	6
1750-2000	4	4	..	1	2	..	..	3	14
2000-2250	..	1	..	1	2	1	1	..	6
Total	85	43	9	15	7	2	1	3	165

(Value of r = 0.57)

Note: 700-800 No respondents

APPENDIX XXVII-I

INCOME AND PRESCHOOLERS' CLOTHING EXPENDITURE IN HIGH INCOME FAMILIES

Income/Year	Pre-schoolers' clothing expenditure								
	100-200	200-300	300-400	400-500	500-600	600-700	800-900	900-1000	Total
	No.of families								
8500-10500	18	8	1	2	..	..	..	..	29
10500-12500	20	10	3	1	..	1	..	..	35
12500-14500	4	5	..	1	..	..	..	..	10
14500-16500	2	10	1	3	3	2	..	..	21
16500-18500	4	8	1	6	..	2	..	..	21
18500-20500	..	5	..	5	..	1	1.	..	12
20500-22500	..	2	..	1	..	..	..	..	3
22500-24500	..	6	3	1	..	4	1	1	16
24500-26500	1	..	..	..	..	..	1	..	2
26500-28500	..	..	..	..	..	..	..	..	0
28500-30500	1	1	..	6	..	1	1	..	10
30500-32500	..	..	..	1	..	..	1	..	2
32500-34500	..	..	..	..	..	1	..	..	1
34500-36500	..	..	..	1	..	2	..	..	3
Total	50	55	9	28	3	14	5	1	165

(Value of r = 0.57)

Note: 700-800 No respondents

APPENDIX XXVIII

CONSOLIDATED RECORD OF ATTENDANCE OF CANDIDATES DURING TRAINING PERIOD

Number of days	January (25)	February (23)	March (25)	April (24)	May (27)	June (26)	Total No. of days (150)	AVerage %age (100)
Candidate	No.of days attended							
1	22	23	25	22	27	25	144	96.0
2	24	20	22	22	26	19	133	88.7
3	23	23	25	24	27	26	148	98.3
4	23	23	25	22	26	26	145	96.7
5	19	23	23	24	27	26	142	94.0
6	23	21	24	23	26	26	143	95.3
7	21	17	21	19	23	26	127	84.7
8	24	23	25	21	27	23	143	95.3
9	..	23	23	13	14	24	97	77.6
10	24	16	25	19	27	26	137	91.3

APPENDIX XXIX

GARMENTS PRODUCED AND STITCHING CHARGES REALISED FOR NTC

S.No.	No.of metres	Items made		Stitching charges	Total Rs.Ps
1.		Frilled P.coats	120	300.00	1025.00
	416.10	Plain p.coats	133	266.00	
	157.45	Frocks	109	459.00	
2.	254.00	Frolled petty coat	124	310.00	
		Plain p.coat	1	2.00	312.00
3.	500.00	Frolled p.coat	212	530.00	
		Plain p.coat	74	148.00	678.00
4.	482.50	Frilled p.coat	212	580.00	
		Plain p.coat	70	140.00	670.00
5.	399.90	Frolled p.coat	167	417.50	
		Plain p.coat	48	96.00	513.50
6.	112.90	Frilled	42	105.00	
		Plain	28	56.00	161.00
7.	100.00	Frilled	39	97.50	
		Plain	20	40.00	137.50
8.	150.00	Frilled(Single)	38	85.50	
		Plain	63	126.00	211.50
9.	150.00	Frilled(Single)	39	87.75	
		Plain	61	122.00	209.75
10.	198.00	Frilled	42	94.50	
		Plain	93	186.00	280.50
11.	86.00	Frilled	19	42.75	
		Plain	38	76.00	118.75

S.No.	No.of metres	Items made		Stitching charges	Total Rs.Ps.
12.	147.00	Frilled	23	51.75	
		Plain	73	146.00	197.75
13.	200.00	Frilled	39	87.75	
		Plain	85	170.00	257.75
14.	100.00	Frilled	16	36.00	
		Plain	50	100.00	136.00
15.	157.00	Frilled	36	81.00	
		Plain	65	130.00	211.00
16.	98.00	Frilled	20	45.00	
		Plain	40	80.00	125.00
17.	100.00	Frilled	18	40.50	
		Plain	48	96.00	136.50
Total	3808.80		2305		5381.50