All the efforts have been made in India to meet the needs of physically handicapped in the area of special appliances to enable them to be independent and self-sufficient. However, the importance of comfortable, convenient and self help clothing, to give a feeling of self-confidence to the handicapped is a neglected area.

The investigator observed several instances and occasions where disabled children were dressed in garments worn by any normal child, without consideration to their specific needs, ability to dress and their deformities. They were tramp like in appearance which was a disappointing and sorry sight indeed. However, as a student of Clothing and Textiles, it seemed that there were great possibilities for improving the clothes of the disabled for comfort, independence and the appearance if certain aspects of clothing were considered.

Also clothing the handicapped child was a major problem faced by many parents, meeting the clothing needs of the handicapped child in choosing suitable clothing as well as making him independent to dress and undress was either frustrating experience or challenge for such parents.
The review of literature revealed that a considerable amount of work has been done in the United States of America and in United Kingdom by occupational therapists and home economists in the area of clothing for the handicapped. A number of researchers, have studied clothes for the handicapped in relation to specific age groups, sex and disabilities. However, the author could not locate any study in India on this subject. Therefore, a need was felt for planning a research study to fill up the research gap.

Specific Statement of the Problem

The purpose of the study was to develop designs for garments to meet every day clothing needs of the children with different disabilities; after obtaining information from parents about disabilities and clothing problems of their handicapped children.

To construct garments that were comfortable and had easily manageable fasteners and enlarged openings that could be closed by the children with limited range of joints and weak finger actions.

To allow extra fullness and reinforcements for accommodating orthopaedic appliances.
To design garments according to current style and fashion to meet the physical and psychological needs of the handicapped children.

Assumptions

The study was undertaken on the basis of the following assumptions:

Specific features in garments could help the handicapped child to get more fun and comfort from his/her clothes, could help him/her to dress and undress himself/herself more easily and quickly, and make his/her home, school and social life easier.

Desirable features in garments could be achieved by making garments similar to those worn by the other children in group in the school.

Suitable outer-wear for the handicapped children was not available and therefore there was a definite need for specially designed clothing for such children.

Parents could be made aware of specific features in the garments that would help them provide proper clothes for their disabled children who could become independent in their dressing.
Limitation

The study was limited to the designs of garments suitable for children suffering from the diseases poliomyelitis, cerebral palsy, tuberculosis of the bones and congenital defects which render the children disabled or handicapped.

For this purpose study was divided into two parts:

Survey Study

In order to understand the different physical disabilities and causes, the Physio and Occupational Therapy Departments of the Shree Sayaji Government Hospital and Home for Crippled Children, Baroda were visited. These visits enabled the investigator to study and observe children having different disabilities and to know from parents what dressing problems they face with such children.

During the course of inquiries it was found that parents had problems of one type or another with the clothes of their handicapped children. Therefore, a questionnaire was framed to gain descriptive information such as causes of disability, education of the child, amount of help needed in self-care activities of daily living, reasons for giving help, problems with fasteners, closures and openings in garments, use of
assistive devices and its damage on clothes, their preferences about size, material, style and types of clothing for their children.

The interview schedule was pre-tested and was found that the questions were easily understood and answers could provide adequate information.

Interview with sixty nine mothers of the physically handicapped children from 6 - 12 age group disclosed that physically handicapped children have different dressing problems. These were: (1) assistance needed to put on and take off garments; (2) fastening; (3) wear and tear in certain areas of garments due to the body deformities and use of appliances.

Experimental Work

After identifying the problems of handicapped children from their parents, seven subjects who had different disabilities and clothing problems were selected for the experimental work. Subjects included for the experimental work were:

A - Boy : Congenital abnormalities of upper limbs.
B - Boy : Spastic hemiplegia of left side.
C - Girl : Spastic hemiplegia of right side.
D - Boy : Cerebral Palsy - quadriplegic.
E - Boy : T.B. of Spine (Kyphosis) Hunchback.
F - Boy : Polio in lower extremities.
G - Girl : Polio in lower extremities.

For these subjects lower and upper garments were developed separately through designs, adaptations, suitable fasteners and proper fit according to the subject's specific needs.

The designed garments were then evaluated by a panel of seven judges comprising clothing experts, occupational therapists and personnel of the Crippled Home. The evaluation of the garments was based on the criteria such as: (1) ease of wearing, (2) manipulation of fasteners, (3) fit of the garment, (4) appropriateness of the pattern for the disability, (5) appearance of the child when garment is put on, (6) comfort and (7) ease of removing.

The findings obtained from seven case studies, it can be concluded that simple features and adaptations were useful to make subjects independent in dressing. The most useful and suitable adaptations found during the investigation were:

1. For easy dressing enlarged openings by keeping full front open.
2. Loose fitting to ease in dressing for comfort, to reduce strain on garment and to accommodate appliances.
3. Simple fasteners placed to be within the reach of the child and visible while fastening for example either fastening placed in the front or change in position of fastener.

4. To keep a minimum number of fasteners or no fasteners.

5. Use of manageable fasteners such as dome backed button with rim stitched with thread shank, loose buttonholes or Velcro instead of buttons.

6. Use of elastic to aid in dressing, as an alternative to fastening and to keep clothes in position, for example elastic at waist and elastic cufflink.

7. Extra opening to facilitate ease in dressing by using zipper on outer seam of trousers, side open in shirt for extra room while dressing.

8. Reinforcements at the point of maximum wear, for example fabric patches on the underside or outside of the garment, strengthening the underarm seams with tape or extra stitching.

9. Tape loops (carriers) sewn on the garment in different position to aid in dressing.