

Procedure

The investigator was interested in physically handicapped children's wearing apparel which could be comfortable, attractive and would help them become independent. She wanted to design garments which could be duplicated by the parents who could either show to the tailors or make the garment themselves. The investigation was undertaken to contribute to the development of functional garment to aid in solving a variety of dressing problems and to meet everyday clothing needs of children with different disabilities.

For this purpose the study was divided into two parts:

I. Survey Study: The first part of the investigation was to obtain information more clearly about disabilities, dressing problems and special clothing needs of handicapped children.

II. Experimental Work: The second part of the research was the development of designs for garments of children with different disabilities.

I. Survey Study

The survey was planned in order to obtain information from parents about disabilities and clothing problems of the handicapped children.

Visits to the Institutions:

In order to understand the different physical disabilities and causes, the investigator regularly visited for nearly 6 months the Physio and Occupational Therapy Departments of Shree Sayaji Government Hospital and Home for Crippled Children, Baroda. These visits enabled her to study and observe children having different disabilities and to know from parents what dressing problems they face with such children.

Formulation of Questionnaire for Interview and Administration of Interview Schedule:

During the course of inquiries the investigator found that parents had problems of one type or another with the clothes of their handicapped children. Therefore, a questionnaire was framed in which a number of questions were included in order 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. A copy of the Interview Schedule is given in Appendix A.

Pre-test of Interview Schedule:

The interview schedule was administered on 9 mothers of the physically handicapped children residing in Sayajiganj, Pratapganj and Fatehganj areas of Baroda.

The major purpose in conducting the pre-test was to test the correct responses of the questions. After the pre-test the individual questions were examined for elimination, retention, and modification on the basis of responses, clarity and comprehensions.

The results of the pre-test indicated that:

- 1) It was effective as far as answerability of the questions were concerned.
- 2) Mothers were co-operative and answered and discussed their problems.

Administration of Interview Schedule:

Sixty nine mothers of the physically handicapped children from 6-12 age group were interviewed. Their addresses were located during the visits to Home for the Crippled Children, Shree Sayaji Government Hospital, and through local agencies like Baroda Citizen's Council and The Society for the Physically Handicapped, Baroda.

The investigator interviewed mothers in their own homes. It was felt that the use of interview method was suitable for

personal contacts; visits and discussion for acquiring the information and observations to study the real problems among such children. Mothers were interviewed in English, Gujarati, Hindi or Marathi since the investigator could speak and understand these languages. Comments that threw additional light on problems to be solved were also recorded.

Findings of Survey Study

The main findings of the survey related to clothing problems of the handicapped children have been discussed.

The information in this section is based on an analysis of 69 cases of the physically disabled children, whose ages were ranging from 6-12 years and were residing with their parents in Baroda city.

Among the 69 handicapped children studied 41 (59%) were males and 28 (41%) were females.

Patel (1965) conducted a study of orthopaedically handicapped children in Baroda city. The study revealed that of the 90 children who participated in the project, 68% of them were boys and the remaining 32% were girls.

A similar study was carried out by Vartak (1965) which also reported that the number of male children in the sample group was comparatively higher than that of female children. Of every three children covered under the study, two of them were male children. His total sample of orthopaedically handicapped children was 90 of which 61 were males and 29 females.

One of the demographic characteristics of Baroda city is that there are fewer females than the males. In 1978, the sex-ratio (i.e. the number of females per 1,000 males) for the Baroda city was 460¹. Given this general characteristic, it is not surprising that for the handicapped covered by the present survey, there were fewer females and more males.

This small number of females among the handicapped might be traced to the fact that, from a biological point of view, the male child is more susceptible to crippling disabilities than the female child as stated by Bhatt (1963). Again people might be more reluctant to disclose disabilities in the cases of their wives, daughters, nieces, etc. said Khandekar (1978).

¹Information obtained from Baroda Municipal Corporation office, Khanderao Market, Baroda.

Table 1

Distribution of the subjects according to the disease.

No.	Name of the diseases	No. of children	%
1.	Poliomelitis	36	52.2
2.	Cerebral palsy	25	36.3
3.	Congenital	5	7.2
4.	Muscular dystrophy	1	1.4
5.	Unclassified	2	2.9
Total		69	100.00

The above results revealed that the largest number of children suffered from poliomyelitis and cerebral palsy (Table 1).

From the total sample of the 69 children 44 (64%) of the children were going to school of which majority were studying in a special school for crippled children, and a few attended a regular school for normal children.

The investigator discussed with many parents their reasons for sending their children to a special school for crippled children. They said that their children would not feel frustrated or feel different because all children attending that school were handicapped. Other reasons were availability of facilities

for special treatment, and also conveyance was provided by the school.

Those 25 (36%) children who did not go to school were unable to take care of themselves specially with clothing or were unable to walk or were mentally weak.

Table 2

Distribution of children who needed help from mothers in doing self-care activities of daily living.

Activities of daily living	Independent		Partially dependent		Completely dependent		Total	
	No.	%	No.	%	No.	%	No.	%
a) Combing hair	31	45	6	8.7	32	46.3	69	100.00
b) Brushing teeth	52	75.3	4	5.7	13	19.0	69	100.00
c) Wash and dry hands and face	48	69.6	5	7.2	16	23.2	69	100.00
d) Take bath	33	47.8	12	17.4	24	34.8	69	100.00
e) Dry body	36	52.2	12	17.4	21	30.4	69	100.00
f) Dressing	19	27.6	25	36.2	25	36.2	69	100.00
g) Eating	54	78.3	6	8.7	9	13.0	69	100.00
h) Walking	31	45.0	16	23.2	22	31.8	69	100.00
i) Climbing stairs	33	47.8	14	20.3	22	31.8	69	99.99

The mothers were asked to indicate as to how much help their child needed in self-care activities of daily living. It was found that only 19 (28%) independent, 25 (36%) needed some help, and 25 (36%) were completely dependent for their dressing. From the above data it is evident that fairly large percentage, that is 50 (72%) of the children needed some help or were completely dependent for their dressing on their mothers (Table 2).

Common reasons stated for not dressing independently were poor balance, use of one hand, body deformities and frustration.

Almost one-half (49%) of the mothers said that they helped their children in dressing because they had pity on them for being helpless. Other common reasons given for giving help were: (1) takes too long to dress; (2) unable to do anything; (3) do not want the child to struggle when he cannot do himself/herself.

Table 3

Distribution of garments for which mother's assistance was needed.

Boys (N=41)			Girls (N=28)		
Garments	Number needed help	%	Garments	Number needed help	%
a) Under pants or underwear	6	14.63	a) Panties	5	17.8
b) Banyan	24	58.53	b) Knickers	10	35.71
c) Vest	22	53.65	c) Slips or petticoats	4	14.28
d) Shorts	26	63.41	d) Skirts	10	35.71
e) Trousers	20	48.78	e) Slacks	1	3.57
f) Shirts	21	51.21	f) Blouses	10	35.71
g) Jerseys or T-shirts	14	34.14	g) Dresses	18	64.28
h) Pyjamas	11	26.82	h) Pyjamas	3	10.71

The mothers were asked to check the list of garments for which their child needed help while wearing. Shorts, banyan, vest, shirt and trousers were difficult for boys to wear, while girls found difficulty in wearing dresses (Table 3).

More than 50% mothers said that they gave assistance in putting on, taking off and for fastening garments.

Garments with full centre front opening were easier to wear than the garments which had to be slipped over the head with half front or half back opening or no opening at the neck.

It was observed by the investigator that majority of the boy's shirts were half open in the front and girls dresses were half open at the back. Therefore they needed assistance while wearing or fastening.

Table 4

Distribution of fasteners used by the subjects.

Fasteners used by the subjects	No.	%
a) Press buttons:		
1) Small	10	14.49
2) Big	10	14.49
b) Hooks and eyes:		
1) Small	18	26.0
2) Big	26	37.68
c) Buttons and button holes:		
1) Small	49	71.0
2) Big	29	42.0
d) Belt and button	5	7.2
e) Zipper	6	8.69
f) Elastic	49	71.0
g) Button loops	0	0
h) Ties	14	20.28
i) Velcro	0	0

Small buttons and elastic used by the tailors or readymade garment industry were used by 49 subjects. Button loops and velcro were not used by anyone.

Fifty four (78%) mothers felt that their children did not require special or specially designed clothes. The others said that they always used elastic at waist, front full open for ease in wearing and removing, and full trousers to disguise abnormality.

Approximately 51 (74%) mothers said that the garments of their children were stitched by tailors, 43 (62%) bought readymade and only 6 (9%) made themselves. Fifty two (75%) mothers reported that they did not make any alterations or adjustments to meet his/her needs.

Majority of the mothers 43 (62%) felt that clothes which their children wore did not cover or conceal abnormality, 20 (29%) answered affirmatively and 6 (9%) did not answer.

Thirty seven (54%) mothers preferred loose and 32 (46%) preferred fitted garments for their children respectively. Comfort, ease in dressing, growth features and do not wear out easily were the main reasons for preferring loose garments. Those who preferred fitted garments said that they want their children to look smart.

Fifty four (78%) mothers preferred cotton material and 28 (41%) liked synthetic as well as cotton for the upper and the lower garments. They chose for the upper garments, light weight material in any colour and design while medium weight material in dark colour for only lower garments.

Those who preferred cotton said it is inexpensive, durable and can be replaced fast being cheap compared to synthetic. Good appearance, requires no ironing, durability and fashion were the reasons for synthetic preference.

Only 12 (17%) of the mothers said that they tried or encouraged their children to dress independently.

From the total sample of the 69 children 28 (41%) used assistive devices to become mobile.

Table 5

Distribution of assistive devices used by 28 children.

No.	Name of the devices	No. of children using devices	%
1.	Braces	22	78.57
2.	Crutches	15	53.57
3.	Special shoes	3	10.7
4.	Wheel chair	1	3.57

Out of these 28 children, 22 (79%) used braces, 15 (54%) used crutches, 3 (11%) wore special shoes and 1 (4%) used a wheel-chair (Table 5).

Twenty one (75%) mothers reported that clothes were damaged due to the use of assistive devices. Fifteen (54%) said crutches caused excessive abrasion on clothing especially under the arm, 14 (50%) mothers said that braces wore out garments around the knee. Crawling was another reason for fast abrasion around seat and knee mentioned by 35 (51%) mothers.

To prevent or to lessen the damage on the clothes only 11 mothers put patches, and seven reinforced the worn out areas with stitching. Others discarded the worn out garments.

Nine mothers said that trousers were difficult to put on and take off on long leg braces.

The survey result showed that physically handicapped children have different dressing problems. Personal interviews helped to assess the specific problems in relation to the disability of the children. Investigator also made observations of individual child attempting to perform dressing activities.

These observations helped the investigator to conclude that there were a number of problems with these children. 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 body deformities or use of appliances.



II. Experimental Work

After identifying the problems of handicapped children from their parents the next task was to design the garments for different needs. For this purpose it was necessary to select a few disabled children as subjects.

Selection of Subjects:

During the course of inquiries and observations at Physio and Occupational Therapy Departments in Baroda and at Crippled Home it was observed that the children between 6-12 years of age were still dependent on others for dressing. Therefore children from this age group were selected for the experimental work.

The survey result showed that about half the number of children 36 (52%) were victims of poliomyelitis, 25 (36%) suffered from cerebral palsy, 5 (7%) were congenital 1 (1%) had muscular dystrophy and 2 (3%) were unclassified. Among the 69 handicapped children studied 41 (59%) were males and 28 (41%) were females.

Patel (1965) and Vartak (1965) conducted studies of orthopaedically handicapped children in Baroda city. They also reported that the number of male children in the sample group was comparatively higher than that of female children.

In the Crippled Home only the boys were in the hostel but the day students were both boys and girls. Also there were more children who were victims of polio and cerebral palsy. Thus more boys were selected as subjects.

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.

These seven subjects presented different types of clothing and dressing problems which the investigator thought would be interesting for the experimental work.

Observation of Selected Subjects to Study His/Her Specific Dressing Problem in Relation to the Disability:

Parents and the Superintendent of the Home for the Crippled Children were contacted by the investigator to obtain information on each subject's disability, capacities in dressing, the appliances used, and each subject's most difficult problem in dressing.

The investigator herself observed and studied these subjects closely in school and at home to determine their clothing problems and see for which part of the dressing he/she struggled and took more time in relation to their physical handicaps.

Preparation and Development of the Basic Blocks for Garments:

Anthropometric measurements of each subject was taken to develop upper and lower blocks. Method of taking measurements designed under the guidance of Professor Justina A. Singh, Head, Department of Clothing and Textiles, Faculty of Home Science, M.S. University, Baroda and used by Agarwal, Veena and Suman, Lamba (1971) and Gogoi, Amiya (1976) were used (Appendix B). Professor Justina A. Singh gave demonstration for locating body landmarks and measuring the body parts.

Using the body measurements, upper and lower basic blocks for shorts, shirt, skirt and blouse of each subject were made. For this purpose instructions given by Juveker (1967), Surti (1957), Hegde (1965), Pivnick (1967), Bray (1970) were modified and used.

Drafting instructions for basic shorts:

Measurements

1. Shorts' length
2. Trousers' length
3. Crotch length
4. Waist girth
5. Hip girth
6. Round leg.

DRAFT OF BASIC SHORTS
SCALE = $\frac{1}{4}$

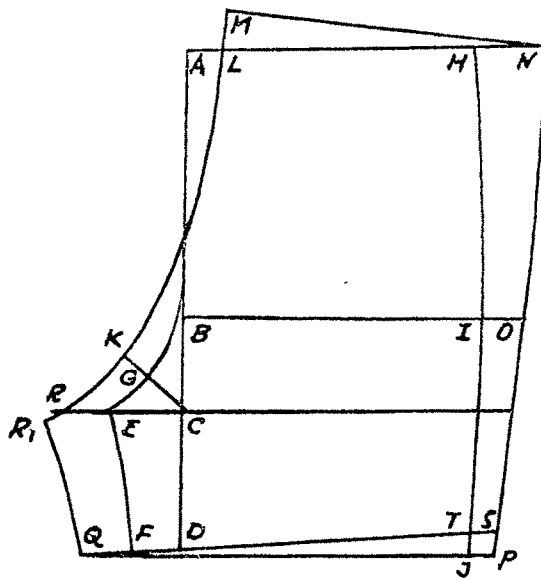


DIAGRAM - 1

Front: (Diagram 1)

A - D = Shorts' length

A - C = Waist to crotch plus 2 cms

C - B = One-twelfth of the hip girth

C - E = One-sixteenth of the hip girth

C - G = Half measurement from C to E plus 1 cm at 45°

Connect E-G-A as indicated on the diagram.

D - F = One-twelfth of the round leg

Connect E-F as shown on the diagram.

A - H = One-fourth of the waist girth plus .5 cm

B - I = One-fourth of the hip girth plus .5 cm

F - J = Half round leg

Connect H-I-J as indicated on the diagram.

J - T = 1. cm.

Back: (Diagram 1)

The draft is made on that of the Front.

E - R = C-E or one-sixteenth of the hip girth

R - R₁ = .5 cm

F - Q = D-F or one-twelfth of the round leg

Connect R₁-Q as indicated on the diagram.

G - K = 1.5 cm

A - L = 1.5 cm

Connect R₁-K-L with a curve for crotch and continue to M
which is 2 cms from L.

ADAPTATION OF TROUSERS FROM THE SHORTS

SCALE = $\frac{1}{4}$

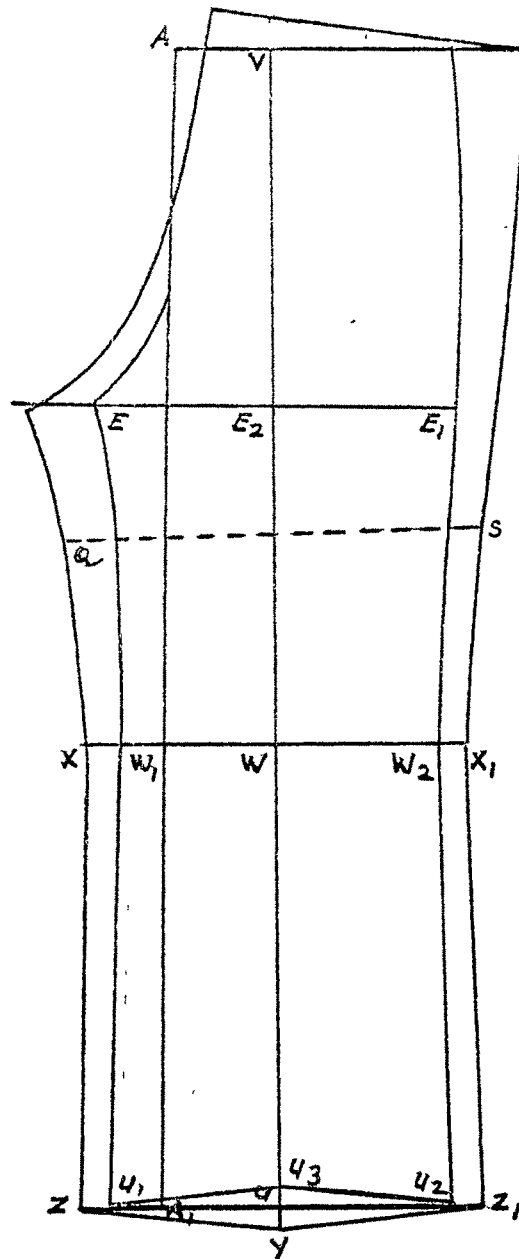


DIAGRAM-2

Extend A-H line.

M - N = One-fourth of the waist girth plus 2 cms on A-H line

I - O = 1.5 cm to 2 cms

J - P = 1.5 cm

Connect N-O-P as indicated on the diagram.

P - S = 1 cm

Connect Q-T-S.

Drafting instructions for trousers

Measurements

1. Trousers' length
2. Round leg.

Trace the pattern of Front and Back of the basic block of shorts (Diagram 1) and adapt trousers' with the following instructions:

Front: (Diagram 2)

A - A₁ = Trousers' length

E₂ = Half the measurement from E-E₁

Square down from E₂ to U and up V for crease line.

U - W = Half of E₂-U plus 4 cms

U - U₁ and U - U₂ = A quarter round leg

W - W₁ and W - W₂ = A quarter round leg less 1 cm

Give shape E, W₁ and U₁ and E₁, W₂ and U₂ as illustrated on the diagram.

U - U₃ = 1 cm

Connect U₁, U₃ and U₂.

DRAFT OF BASIC SHIRT

SCALE = $\frac{1}{4}$

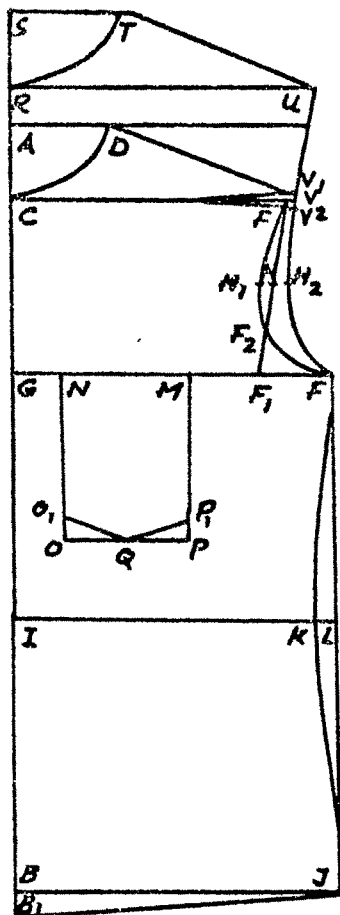


DIAGRAM-3



DIAGRAM-6

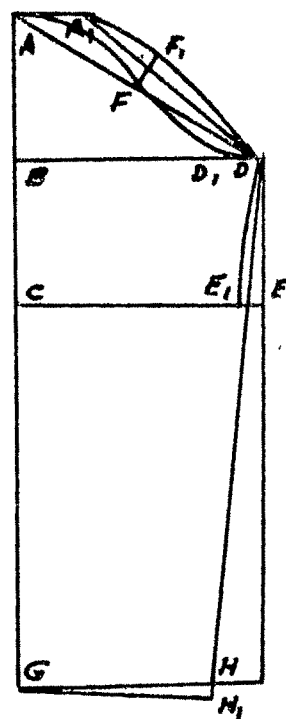


DIAGRAM-4

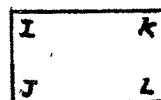


DIAGRAM-5

Back: (Diagram 2)

$$W_1 - X = 1.5 \text{ cm}$$

$$W_2 - X_1 = 1.5 \text{ cm}$$

$$U - Y = 1 \text{ cm}$$

$$U_1 - Z \text{ and } U_2 - Z_1 = 1.5 \text{ cm}$$

Give shape Q, X and Z and S, X_1 and Z_1 as shown on the diagram.

Connect Z, Y and Z_1 .

Drafting instructions for basic shirt

Measurements

1. Shirt length
2. Round neck
3. Shoulder width
4. Chest girth
5. Waist girth
6. Sleeve length -
 - (a) Half
 - (b) Full
7. Round sleeve.

Front: (Diagram 3)

$$A - B = \text{Shirt length}$$

$$A - C = \text{One-sixth of the round neck less .5 cm}$$

$$A - D = \text{One-sixth of the round neck}$$

Join C to D with a curve for the front neckline.

$C - E =$ Half shoulder width

$A - G =$ One-fourth of the chest girth less 2 cms

$G - F =$ One-fourth of the chest girth plus 2 cms

$G - F_1 = C-E$ less 1.5 cm

Connect $E-F_1$.

$F_1 - H =$ Half the measurement from F_1 to E

$H - H_1 = 1$ cm

$F_1 - F_2 = 1.5$ cm

Join $E-H_1-F_2-F$ with curve as in the diagram.

$G - I = A-G$

$B - J = G-F$

J is perpendicular to F .

$J - L = B-I$

$K - L = 1.5$ cm

Connect $F-K-J$ as indicated in the diagram.

$B - B_1 = 1.5$ cm

Connect B_1-J with a slight curve.

Pocket: (Diagram 3)

$F_1 - M = 4$ cms

$M - N =$ One-eighth of the chest girth

$N - O = M-N$ plus 2 cms

$O - Q =$ Half the measurement from O to P

$O - Q_1 = 1$ cm and $P - P_1 = 1$ cm

Connect O_1-Q-P_1 .

Back: (Diagram 3)

A - R = 2 cms

R - S = One-sixth of the round neck less .5 cm

S - T = One-sixth of the round neck plus 1 cm

Join R to T with a curve for the back neckline.

Square out R.

T - U = D-E

H₁ - H₂ = 1.5 cm

Join U-H₂-F with a curve as shown in the diagram.

Yoke: (Diagram 3)

Extend C line.

V - V₁ and V - V₂ = .5 cm on either side of V

Connect C-V₁ and C-V₂ as indicated on the diagram with a slight curve.

Half Sleeve: (Diagram 4)

A - C = Sleeve length

A - B = One-eighth of the chest girth

B - D = One-fourth of the chest girth less 2 cms

C - E = B-D

A - A₁ and D - D₁ = 2.5 cms

Connect A-D and A₁-D.

A - F = Half the measurement from A-D

F - F₁ = 2 cms perpendicular to A-D.

Connect $A-A_1-F-D_1-D$ and $A-A_1-F_1$ and D as illustrated on the diagram.

$C - E_1 =$ Half of the round sleeve

Connect E_1-D .

Full Sleeve: (Diagram 4)

$G - A =$ Full sleeve length - cuff width

$H - G =$ One-sixth of the chest girth

Connect $D-H$ and extend .5 cm to H_1 .

Connect $G-H_1$ with a slight curve.

Cuff: (Diagram 5)

$I - J =$ Cuff width

$K - I =$ One-eighth chest girth plus 1 cm

$L - K = J-I$.

Collar: (Diagram 6)

$A - B =$ 6 cms

$B - C =$ Half of the round neck plus .5 cm

$A - D = B-C$

$D - E =$ 2.5 cms

$C - F =$ 1 cm

Complete the draft according to the diagram.

DRAFT OF BASIC SKIRT
SCALE = 1/4

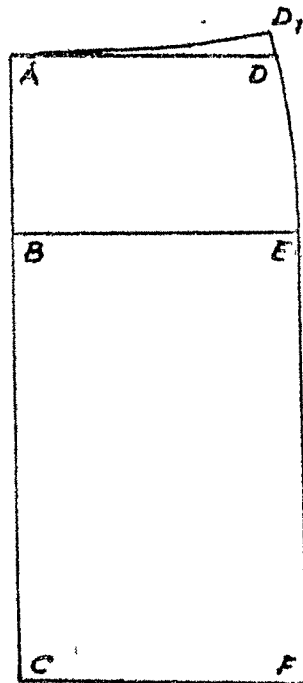


DIAGRAM-7

Drafting instructions for basic skirtMeasurements

1. Skirt length
2. Waist girth
3. Hip girth.

Front and Back: (Diagram 7)

A - C = Skirth length

B - A = One-eighth hip girth plus 2 cms

Extend A-B-C on right.

D - A = A quarter of the waist girth plus .5 cm

E - B = A quarter of the hip girth plus .5 cm

F - C = E-B

Connect F-E-D and continue to D_1 which is 1 cm from D.

Join D_1 -A as shown in the diagram.

Drafting instructions for basic blouseMeasurements

1. Blouse length
2. Round neck
3. Bust girth
4. Waist girth
5. Shoulder to waist length
6. Shoulder width
7. Sleeve length
8. Round sleeve.

DRAFT OF BASIC BLOUSE

SCALE = 1/4

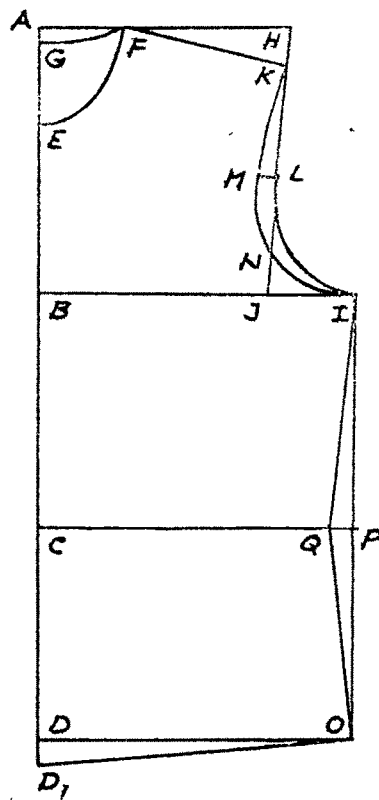


DIAGRAM - 8

Front and Back: (Diagram 8)

A - D = Blouse length

A - B = One-fourth of the bust girth

A - C = Highest shoulder to waist level

E - A = One-sixth of the round neck plus 1 cm

F - A = One-sixth of the round neck

G - A = 1 cm

Join E-F with a curve for the front neckline and G-F for the back neckline.

H - A = Half shoulder width

I - B = One-fourth of the bust girth plus 2 cms

B - J = A-H less 1.5 cm

Connect H-J.

H - K = 2 cms

Connect F-K

L - J = Half the measurement for J-K

M - L = 1 cm

N - J = 2 cms

Connect K-M-N-I for the front scye and K-L-I for the back scye as indicated on the diagram.

O - D = B-I

O is perpendicular to I.

O - P = D-C

Q - P = 1.5 cm

Connect I-Q-O as indicated on the diagram.

$$D_1 - D = 1.5 \text{ cm}$$

Join D_1 -O with a slight curve.

Sleeve

Same as Diagram 4.

Collar

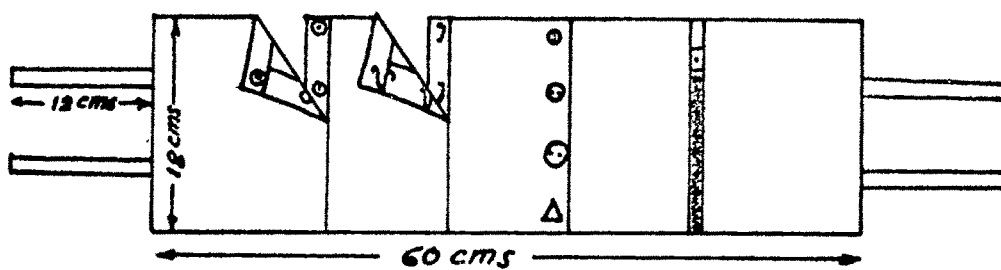
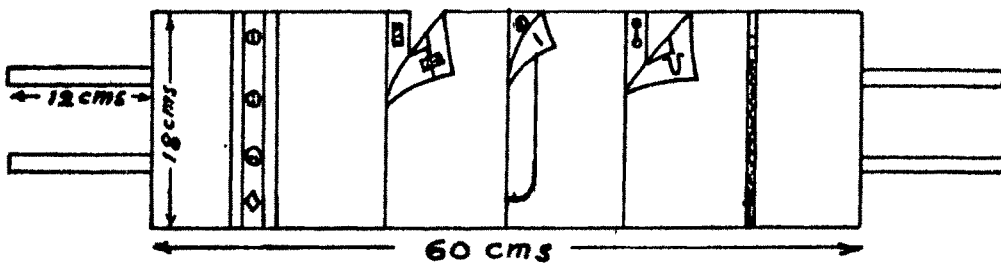
Same as Diagram 6.

Paper patterns for lower and upper blocks for each subject were developed, cut on the muslin cloth, stitched and were tried for proper fitting.

Few alterations were made according to each subject's need on graph papers. These were retraced, cut on muslin, stitched and were again tried on subjects for proper fitting. These were the final blocks used for further adaptations for the final garments.

Selection of Material for Garments:

Survey results showed that largest number of mothers 54 (78%) preferred cotton for upper as well as for lower garments. Therefore, cotton fabric was chosen for the study. For the upper garments poplin and for the lower garments denim with twill weave and casement were purchased from Mafatlal Groups of Mills and Binny's Textiles respectively. Colours for upper

BUTTON BELTSCALE = $\frac{1}{16}$ WITH RIGHT OVER LEFT OVERLAPFIGURE - 1WITH LEFT OVER RIGHT OVERLAPFIGURE - 2

garments were white, beige and cream and for lower garments green, coffee and grey.

Preparation of Button Belt to Test the Ability for Fastening:

To make sure which of the fasteners the subject could manage two button belts¹ containing a variety of fasteners such as fancy button, zipper, hooks, press buttons, buttons and Velcro dabs of different sizes were prepared.

One belt was with right over left opening (Figure 1) and the other was with left over right (Figure 2). This belt was tied around the subject so that the required fasteners are situated where they normally would be on his/her clothes. These belts also helped to know exactly which fasteners a subject could manage and what difficulties he/she has with fasteners which he/she could not manage. These were also used to teach and practice fastening of fasteners before they were used on their designed garments.

Development of Garments According to Each Subject's Specific Need:

The final upper and lower garments were developed with adaptations and functional features for each subject separately with trial and error according to his/her specific need.

¹National Society for Crippled Children and Adults.
Cerebral Palsy Equipment. Chicago: National Society for
Crippled Children and Adults, No.42.

The subjects wore the designed garments for one month under the instructions and observation of the investigator which gave them confidence to dress and undress independently.

Evaluation of Designed Garments:

In order to evaluate the adaptations and functional features of the designed garments, a five point rating scale (Appendix C) was formulated. A low score of 1 was given for "unsatisfactory" rating and a high score of 5 was for "very good" rating.

A panel of 7 judges comprising clothing experts, occupational therapists and personnel of the Crippled Home were selected to evaluate the designed garments. Each subject demonstrated how these garments were worn and removed by them in a position he/she felt comfortable such as: sitting on the floor, sitting on a stool, leaning against wall or any object in front of the judges. This was done to show how well they can manage the suitable garments for the disability without any help. The judges gave their rating by giving scores to each garment for the adaptations and various functional features introduced in the garments to overcome the subject's dressing difficulties and clothing problems. Evaluation of the garments was based on the criteria: ease of wearing, manipulation of fasteners, fit, appropriateness of the pattern to the disability, appearance of the child when garment is put on, its comfort and ease of removing.

Children were also interviewed by the investigator to know their opinions about the designed garments.