

Research Paper :

## Clothing requirements of physically challenged college going boys and designing suitable garments

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### ABSTRACT

The present investigation was carried out to design functional garments for physically challenged college going boys. Sixty respondents aged 15-30 years were purposively selected. Poliomyelitis was the main cause of disability among the respondents. Respondents were facing numerous problems in clothing while donning and doffing and due to assistive devices used. Based on the needs of the respondents, 20 designs (10 each for shirts and pants) were prepared by the investigator and subjected to evaluation by a panel of judges. The designs were made keeping in view the ease in dressing and undressing, ease in manipulating fasteners, fit of the garments, appropriateness of designs for the disability and appearance of the respondents. Total six designs (three each for shirt and pant) which scored highest were selected for construction of garment based on the standard measurements of the respondents. Among these six garments, G-7 Zipper Shirt and G-8 Two Piece Pant was given first rank by the respondents.

**Key words :** Physically challenged, Functional clothing, Clothing problems

The desire to decorate the human form existed since the stone age. Clothing which is one of the basic needs of human being, plays a significant role in an individual's life at all stages. Clothing can improve appearance, hide physical defects and give aesthetic pleasure to the wearer through its colours, design and special features in the dresses.

Clothing plays an important role in the growth and development of physically challenged persons. If a disabled person is able to manage to dress himself, it may help him to gain confidence and independence. Usually a person with physical limitations wears ordinary clothes which may hinder their movement produce discomfort and even build inferiority complex. Therefore, the task of dressing and undressing may become too long and laborious.

The era of scientific thought and development has revolutionized the traditional concept of disability. Thus, especially designed functional clothes with self-help features may help them to overcome clothing related problems. Therefore, the present study has been framed to help the physically challenged boys to cope up with their physical disability and at the same time to provide them with appropriate dress style.

### METHODOLOGY

The study was conducted in Dr. Ambedkar Institute of Technology for Physically Handicapped, Kanpur as it is the only college for physically challenged students in

Kanpur district. As many as 60 physically challenged college going boys of age group of 15-30 years were selected through random sampling technique. An interview schedule was used to collect the data pertaining to clothing practices and clothing needs of the respondents. Based on the requirements of the respondents, 20 garments (10 each for shirts and pants) were sketched and shown to a panel of judges (respondents and teachers) for ranking. The 6 sketches (3 each for shirts and pants) given the highest rank were stitched and subjected to evaluation by the respondents and ranked on the basis of weighted score.

### FINDINGS AND DISCUSSION

The data pertaining to the study were tabulated and analyzed. This included data about the background information of the respondents, their special clothing needs, features of constructed garments and assessment of acceptability of the garments. The results have been furnished below-

#### Socio-personal profile of the respondents:

The findings related to the socio-personal profile of the respondents are presented in Table 1. It reveals that majority of the respondents (66.66%) were in the age group of 15-20 years. Sixty per cent of the respondents were educated up to intermediate and only 5.00 per cent were postgraduates. The findings reveal that 45.00 per cent of the respondent's family occupation was service

Respondents attribute	Categories	Number	Percentage
Age (years)	15-20	40	66.66
	21-25	19	31.66
	26-30	01	1.66
Education	High School	16	26.66
	Intermediate	36	60.00
	Graduate	05	8.33
	Post graduate	03	5.00
Family occupation	Service	27	45.00
	Farming	23	38.33
	Business	09	15.00
	Labour	03	5.00
Monthly income (Rs)	Below 1,000	10	16.66
	1,000-5,000	23	38.33
	5,000-10,000	16	26.66
	10,000-15,000	07	11.66
	Above 15,000	04	6.66
Type of family	Nuclear	30	50.00
	Joint	30	50.00
Size of family	Small	18	30.00
	Medium	37	61.66
	Large	05	8.33

while 38.33 per cent had farming as family occupation. About 38.33 per cent of the respondent's family income ranged between Rs. 1,000-5,000 only. Half of the respondents belonged to joint family and rest half to the nuclear family while majority of the respondents (61.66%) hailed from medium family.

#### Information regarding causes of physical disability:

It was observed from Table 2 that poliomyelitis was the main cause of physical disability for majority (70.00%) of the respondents. Rest 30 per cent of the respondent's physical deformity occurred due to accidents and tuberculosis of bones and joints.

Disability	Number	%
Poliomyelitis	42	70.00
Accidental	09	15.00
Tuberculosis of bones and joints	09	15.00

#### Information regarding problems in clothing:

Being physically challenged, the respondents were facing numerous problems in clothing. They were using many assistive devices which caused damage to the cloths. About 33.33 per cent of the respondents were

using callipers creating difficulty in donning and doffing of lower garment. Crutches were used by 26.66 per cent of the respondents which causes rubbing of under arms. Rubbing of pant's hemline occurred due to wheelchair and tricycle which was used by 6.66 per cent and 10.00 per cent of the respondents, respectively (Table 3).

Assistive devices	No.	%	Problem caused
Callipers	20	33.33	Difficulty in donning and doffing of lower garment
Crutches	16	26.66	Rubbing of under arm
Wheelchair	4	6.66	Rubbing of pant's hemline
Tricycle	6	10.00	Rubbing of pant's hemline
None of the above	14	23.33	-

The data of Table 4 reveal that 35 per cent of the respondents were having difficulty in putting on and taking off the lower and upper garments. About 26.66 per cent and 20 per cent of the respondents had problem in fastening button and zipper of the upper garments, respectively. Regarding lower garments, half of the respondents had difficulty in slipping them over the pelvic region.

Garment	Activities	No.	%
Upper garment	Putting on and taking off the garments	21	35.00
	Problem in fastening button	14	26.66
	Problem in fastening zipper	12	20.00
	None of the above	13	21.66
	Total	60	100.00
Lower garment	Putting on and taking off the garments	21	35.00
	Slipping it over the pelvic region	30	50.00
	None of the above	09	15.00
	Total	60	100.00

#### Designing, evaluation and construction of garments:

Based on the difficulties and needs of the respondents, 20 designs (10 each for shirts and pants) were prepared by the investigators and subjected to evaluation by the respondents and a panel of judges including respondents using scoring method. The designs were made keeping in view the ease in dressing and undressing, ease in manipulating fasteners, fit of the

**Table 5 : Feature of the constructed garments and their purpose**

Garment	Feature	Purpose
G-7 : Zipper Shirt	Shirt with both side shoulder and sleeve opening	Ease in putting on and taking off the garment
	Zipper used as fastener	To save time and ease in wearing
	Back is slightly longer than front	To hide the disability of pelvic region
	Eyelet and strings used as fastener in neckline	To save time and ease in wearing
G-6 : Check Shirt	Foam padding used at arm pit	Prevent rubbing of garment by crutch
	Velcro used as fastener on front opening	For ease in opening
	Velcro used as fastener on cuff	To prevent entanglement and abrasion from wheelchair or tricycle
G-10 : Velcro Shirt	Shoulder and side opening	Ease in putting on and taking off the garment
	Velcro used as fastener	To save time and ease in wearing
G-7 : Full Zipper Pant	Full both side opening	Ease in putting on and taking off the garment
	Zipper used as fasteners	To save time and ease in wearing
G-8 : Two Piece Pant	Zipper used at knee level	Can be used as half pant as well as full pant
		Ease in using calipers
G-9 : Velcro Pant	Velcro tape used at bottom	to prevent abrasion from wheelchair or tricycle

garments, appropriateness of designs for the disability and appearance of the respondents. Total six designs (three each for shirt and pant) which scored highest were constructed based on the standard measurements of the respondents (Table 5).

#### Acceptability of the constructed garments

The garments were given to the respondents to wear for the purpose of evaluation. The factors which were considered for evaluation were fasteners, ease in donning and doffing, comfort and dressing independently. Table 6 reveals that Zipper shirt (G-7) got the first rank with weighted score 120 followed by G-6 Check shirt which got the weighted score of 70. G-10 Velcro shirt was placed at third rank with a weighted score of 60. Regarding pant it was observed that G-8 Two piece pant got the first rank with a weighted score of 120. G-7 Full zipper pant was placed at second rank (weighted score=80) while G-9 Velcro pant got weighted score of 60 and placed at third rank.

These especially designed functional clothes will make the process of donning and doffing easier as well as ease in manipulating fasteners for the disabled. This will in turn boost up the morale of the wearers by saving

**Table 6 : Acceptability of the constructed garments**

Sr. No.	Garments	Weighted score	Rank
1.	G-7 : Zipper Shirt	120	I
2.	G-6 : Check Shirt	70	II
3.	G-10 : Velcro Shirt	60	III
4.	G-8 : Two Piece Pant	120	I
5.	G-7 : Full Zipper Pant	80	II
6.	G-9 : Velcro Pant	60	III

him from pain, embarrassment and hardship face during dressing and undressing. The designed garments can be the basis for production on a large scale so as to cater to the large population of the disabled. The latest fashion feature can also be added in the functional garments so as to make the garment aesthetically appealing. Similar type of investigations were carried out by Feather *et al.* (1979), Hall and Vigons (1964) and Kernalegaun (1977) regarding attitudes and clothing adoption.

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#### REFERENCES

- Feather, L. Betty**, Martin, B. Betty and Miller R. Wilber (1979). Attitude towards clothing and self concept of physically handicapped and able bodied university men and women, *Home Economics Res. J.*, 7 (8):234-240
- Hall, D.S.** and Vigons, P.J. (1964). Clothing adaptation for child with progressive muscular dystrophy, *American J. Occupational Therapy*, 18 (3): 108-112.
- Kernalegaun, A.** (1977). Future directions for clothing and textiles. *Canadian J. Home Eco.*, 27 (1) : 9-16

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