

## Clothing Related Problems Encountered by Paraplegics

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**ABSTRACT** In an interview and observation of male and female paraplegics it was found that they faced various type of clothing related problems. A few paraplegics faced problems while wearing and removing upper garments as they had pain in their upper limbs whereas other common problems faced by majority of the paraplegics were: slipping legs in garments and removing them, garment and bed wetting because of incontinence, bunching of garments causing discomfort and bed sores at pressure points e.g. scapula region, hip or back bones and wounds due to traction belt.

### INTRODUCTION

Paraplegics are the persons suffering from paraplegia i.e. paralysis of the lower part of the body and the legs. This generally occurs due to backbone injury which leads to sensory loss causing dysfunction of lower part of body. As a result, the dressing ability of such persons is completely affected. Many of the paraplegics have problem of incontinence that mean they do not have control over urine. The problems of such persons are compounded because of garments and bed wetting. Due to limited strength and endurance they keep on lying in one position which leads to bed sores. Inappropriate clothing that put pressure on the body, thick seams, rough fabric or bulky trims if placed in pressure areas such as under the seat or against the back may also cause the formation of pressure sores. Under such conditions, they need specially designed clothing. With these criteria in mind, efforts were made to identify the clothing related problems of the paraplegics to provide them garments styled for ease in dressing, prevent soaking of entire outfit and bed wetting.

### METHODOLOGY

In a study conducted on 200 handicapped persons, 62 were paralytics. Among paralytics, 25 were paraplegics comprising 15 males and 10 females. Interview and observation methods were used to identify the problems encountered by them while dressing/undressing.

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### RESULTS AND DISCUSSION

***Paraplegic Men: Problems Encountered and Help Obtained While Dressing and Undressing:*** Mobility and sensation of lower limbs of paraplegic respondents was affected to a greater extent, which led to clothing related problems with lower garments. A few respondents were suffering from pain in their upper limbs on account of back injury but in few other cases, continuous bed-ridden condition had led to weakening of upper limbs.

From the data regarding paraplegic men (Table 1), it has been observed that there were only 26.66 per cent respondents who had problems in their upper limbs. They all faced problems while dressing/undressing of upper garments and all of them were always assisted ( $\bar{x}_w=2$ ), while 'slipping garments and removing the garments through their arms and head'. 'Fastening/unfastening of placket and cuff fasteners' were also generally done by others ( $\bar{x}_w=1.5$ ).

It is evident from the data regarding lower garments that all the respondents (100%) faced problems while 'slipping and removing garments off the legs' and 'setting the garments at waist' who always obtained others' help ( $\bar{x}_w=2.0$ ). A very few of the respondents reported that 'untying of string' was difficult for them. A few of the respondents obtained help while tying ( $\bar{x}_w=1.25$ ) and 'untying of string' ( $\bar{x}_w=1.00$ ). None of the respondents were wearing pants, so its specific problems were not observed.

***Paraplegic Women: Problems Encountered and Help Obtained While Dressing and Undressing:*** Data regarding problems encountered by paraplegic women (Table 2) while

dressing and undressing of upper garments revealed that 40 percent respondents faced problems while 'slipping and removing garments off the arms and head'. They obtained help most of the time ( $\bar{\chi}_w = 1.75$ ) for this purpose. They did face problems with the lower garments as well. All the respondents reported that 'slipping and removing garments off the legs' was problematic for which help was always required ( $\bar{\chi}_w = 2$ ). The problem of setting the garments at waist was also reported by all the respondents. This was

generally done by others ( $\bar{\chi}_w = 1.4$ ). Very few respondents (30%) found 'tying/untying of string' a difficult task, so help was obtained rarely ( $\bar{\chi}_w = 0.60$ ). The problem of dressing and undressing of upper garments was reported because of pain in the upper limbs, which was caused on account of backbone injury. The respondents were unable to raise their arms while wearing and removing garments like *kameez/kurta*, which did not have a center front placket. Problems with lower garments were encountered because of loss of

**Table 1: Paraplegic men problems encountered and help obtained while dressing and undressing (n=15)**

S. No.	Dressing/ undressing procedure	Problems encountered			Help obtained
		Yes	No	NA	WMS ( $\bar{\chi}_w$ )
<i>1. Upper Garments</i>					
i)	Slipping hands in sleeves	4 (26.66)	11 (73.34)	-	2.00
ii)	Slipping garments over head	4 (26.66)	8 (53.34)	3 (20.00)	2.00
iii)	Manipulation of placket fasteners	4 (26.66)	11 (73.34)	-	1.50
iv)	Manipulation of cuffs' fasteners	4 (26.66)	10 (66.67)	1 (6.67)	1.50
v)	Unfastening of cuffs' fasteners	4 (26.66)	10 (66.67)	1 (6.67)	1.50
vi)	Unfastening of placket fasteners	4 (26.66)	11 (73.34)	-	1.50
vii)	Removing garments off the head	4 (26.26)	8 (53.34)	3 (20.00)	2.00
viii)	Removing garments off the arms	4 (26.26)	11 (73.34)	-	2.00
<i>2. Lower Garments</i>					
i)	Slipping legs in garments	15 (100.00)	-	-	2.00
ii)	Setting garments at waist	15 (100.00)	-	15 (100.00)	2.00
iii)	Tucking of shirt	-	-	15 (100.00)	0.00
iv)	Fastening of pants' belt	-	-	15 (100.00)	0.00
v)	Fastening of fly's zipper	-	-	15 (100.00)	0.00
vi)	Tying of string	4 (26.66)	11 (73.34)	-	1.25
vii)	Untying of string	2 (13.33)	13 (86.67)	-	1.00
viii)	Unfastening of pants' belt	-	-	15 (100.00)	0.00
ix)	Unfastening of fly's zipper	-	-	15 (100.00)	0.00
x)	Removing garments off the legs	-	-	-	2.00
xi)	Tying of <i>Dhoti</i>	15 (100.00)	-	-	2.00

Figures in parenthesis show percentage; WMS ( $\bar{\chi}_w$ ) = Weighted mean score weighted by frequency.

**Table 2: Paraplegic women problems encountered and help obtained while dressing and undressing (n=15)**

S. No.	Dressing/ undressing procedure	Problems encountered			Help obtained
		Yes	No	NA	WMS ( $\bar{\chi}_w$ )
<i>1. Upper Garments</i>					
i)	Slipping garments in sleeves	4 (40.00)	6 (60.00)	-	1.75
ii)	Slipping garments over head	4 (40.00)	6 (60.00)	-	1.75
iii)	Manipulation of placket fasteners	-	-	10 (100.00)	0.00
iv)	Unfastening of placket fasteners	-	-	10 (100.00)	0.00
v)	Removing garments off the head	4 (40.00)	6 (60.00)	-	1.75
vi)	Removing garments off the arms	4 (40.00)	6 (60.00)	-	1.75
<i>2. Lower Garments</i>					
i)	Slipping legs in garments	10 (100.00)	-	-	2.00
ii)	Setting garments at waist	10 (100.00)	-	-	1.40
iii)	Tying of string	3 (30.00)	7 (70.00)	-	0.60
iv)	Untying of string	3 (30.00)	7 (70.00)	-	0.60
v)	Removing garments off the legs	10 (100.00)	-	-	-

Figures in parenthesis show percentage; WMS ( $\bar{\chi}_w$ ) = Weighted mean score weighted by frequency.

**Table 3: Other problems relating clothing faced by paraplegics\*(n=25)**

S. No.	Problems	Frequency	Percentage
1.	Bed wetting caused by dripping of urine (use of catheter)	19	76.00
2.	Bed sores at pressure points (shoulder blades and hip bones)	13	52.00
3.	Wounds caused by belt used for traction	5	20.00
4.	Bunching of garments	7	28.00

\*Multiple responses.

sensation in legs, which hampered their mobility.

**Other Problems Relating Clothing Faced by Paraplegics:** In case of paraplegia the backbone problem leads to loss of control over natural calls specially urination. To avoid frequent bed wetting, a catheter was used.

Prolonged use of catheter lead to dripping of urine especially among women. Change of sanitary towels was also a problem for women during menstruation. Even after treatment many persons did not recover to the stage of normal walking or proper control on urination especially at night or in winter. So the problem of 'bed wetting' was reported by a majority of paraplegics (76%) as indicated in Table 3. 'Bed sores at pressure points i.e., shoulder blades, hip bones, knee and ankle bones' were also observed in 52 per cent respondents. Bunching of garments and 'wounds caused due to traction belt' were reported by 28 percent and 20 percent respectively.

Yep (1976), Alexander (1977), Jaipuria (1983) and Aggarwal (1993) reported that paraplegics encountered various problems while dressing and undressing. Specially designed garments for urinary incontinence were reported by Beber (1980) and Bavendam (1990).

From the data, it can be concluded that following were the problems encountered by paraplegics with their clothing:

1. Wearing and removing upper garments by them if they have pain in their limbs.
2. Slipping legs in garments and removing them.
3. Garments and bed wetting because of incontinence.
4. Bunching of garments causing discomforts and bed sores.
5. Bed sores at pressure points e.g. scapula region, hip or backbones.
6. Wounds due to traction belt.

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