

## Designing and evaluation of functional pants for lower limb amputated children

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### ABSTRACT

Clothing is one of the most personal component of daily life. Physical disability affects the type of clothing that can be worn. For handicapped, dressing is a very difficult and often impossible task. Thus, there is a great need to design clothing for handicapped and disabled. Respondents faced clothing problem *i.e.* frequent wear and tear of the garments at armpit level, donning and doffing of the garments, problem with fasteners, bunching of garment at under armpit due to crutches and raising of upper garments. The identified clothing problems were incorporated in pant designs for lower limb amputated and were given to five randomly selected respondents for wear trial. Developed pant designs were found highly suitable and acceptable by lower limb amputated respondents and their mothers.

**Key words :** Functional clothing, Physical disability

Clothing is one of the basic necessities of human life. Clothing has been recognized, as a primary need of mankind throughout the world. Clothes render on individual identity. Clothing is a form of nonverbal communication. Clothing tells something about the person wearing it. The social and psychological aspects for the physically handicapped are especially important. Improved appearance increases self-confidence and helps one to gain social acceptance. Clothing carefully selected for its design, color and fabric can be used to enhance to individuality and to minimize the appearance of the deformity. Specially designed clothing for handicaps encourage independence, self-reliance and promote adjustment to disability. (Hallenback, 1966)

The children with physically handicapped face a number of problems while performing their daily activities thus use support of crutches, guards, spints, callipers and requirements. Parents play an important role in rehabilitating these children. These clothing problems may be minimized by designing suitable garments for the needy as well as to supplement their personality. The objectives are as to study the clothing problems encountered by children with lower limb amputated, to design and construct suitable functional garments and to find out the acceptability and suitability of designed functional garments

### METHODOLOGY

The present study was conducted on lower limb amputated children at Narayan Sewa Sansthan of Udaipur city. This research was based on a descriptive cum experimental design *i.e.* designing and evaluation of functional garment for lower limb amputated. A total 30

respondents were selected randomly for experimentation. Pretested structured interview schedule was used for getting the complete and desired information. Ten sketches of functional pants were designed. A five point rating performa was used to evaluate functional pants designs with the help of five occupational therapist and five clothing and textile experts. These three pant designs were constructed according to individual body measurements of the respondent by the researcher and were given to randomly selected five respondents for a wear trial for three consecutive days. A three point rating scale was used for assessment of suitability and acceptability of functional pants. The frequency, percentage, weighted mean score and acceptability scores was calculated to analyse the data.

### RESULTS AND DISCUSSION

The following section contains the outcome of the major observation made during the study. The findings of the present study are discussed here below:

#### *Clothing problems lower limb amputated:*

To find out clothing problems encountered by lower limb amputated children possible problems were enlisted and their responses were obtained as shown in Table 1.

The above table shows that the 60 per cent of respondents faced clothing problem of frequent wear and tear of garment at armpit level.

The half of the respondents faced problem with donning of the garments, doffing of the garment and with fasteners. 26.66 per cent respondents were having problem with bunching at under armpit due to crutches.