

DESIGN ISSUES OF ADAPTIVE GARMENTS FOR WOMEN WITH DISABILITIES

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Abstract. This article analyzed the scientific research conducted on the design of comfortable clothing for people with limited mobility. Statistics of people with limited mobility were studied. The distribution of people with limited mobility according to the type of disease, age and disability group was considered. The relevance of production of clothes that provide comfort during exploitation to the part of the population with limited physical capabilities was highlighted. Factors of clothing that have a negative effect on the psycho-physiological condition of people with limited mobility using wheelchairs have been determined. The goals and tasks for the development of flexible clothing for people with limited mobility were defined and the object of research was selected. Interviews and questionnaires were conducted among women in "Inclusive Society" and "Mehribonlik" society in Tashkent city and Tashkent region in order to identify, analyze, and conduct sociological research on the advantages and disadvantages of existing clothes of people with limited mobility. 50 respondents aged 17 to 35 took part in it. According to the results of the conducted sociological survey, it was found that 50% of the women who took part in the survey belonged to the first and second groups of disabilities.

Keywords: Disability group, clothing, flexible clothing, rehabilitation, limited mobility, survey questionnaire, jacket, blouse, pants, respondent

INTRODUCTION

Although there are laws and regulations on ensuring the rights of people with disabilities in Uzbekistan, in fact, these people cannot fully participate in the activities of society due to various external factors. The Law "On social protection of disabled people in the Republic of Uzbekistan" defines that "a person who needs social assistance and protection due to physical or mental disabilities due to limited life activities is considered disabled" [1]. Thus, disability is equated to disease or impairment of the functions of human body organs. However, the UN Convention on the Rights of Persons with Disabilities [2] states that "disability is a condition that arises as a result of the interaction between people with impaired bodily functions and barriers related to attitudes and infrastructure." In other words, it is not only the defects of the human body, but also the lack of a favorable environment and negative factors that oppose the participation of such people in the life of society. As a result of impairments that may be physical, cognitive, mental, emotional, emotional development or various combinations thereof, a person is unable to perform self-service, independent movement, navigation, communication, control of their own behavior, learning and work activities. completely or partially loses its ability [3-4].

The term "person with a disability" is frequently used in the media, in regulations and legal documents, and in official UN materials. But today it is increasingly being replaced by the phrase "people with reduced mobility" (PWD) [5].

The clothes they use and their design are of great importance for such people to have their place in society, to enter into full communication with healthy people, to feel free.

Clothing is used not only to protect a person from the negative effects of the environment, but also to ensure interaction with the surrounding social and physical environment. For a group of people with limited mobility and using wheelchairs, the functional possibilities of using adapted clothing are the main means of rehabilitation to improve their lifestyle and quality of life [6-7].

At the same time, the issue of centralized production and targeted delivery of special clothes in our republic that can create an attractive image, provide a high level of operational convenience and safety in self-service, and are adapted to the needs and specifics of the life of a person with limited mobility has not yet been resolved [8-9].

Volkova V.M.[10], Taran A.N.[11], Kholostova V.V. from the scientists of the Russian Federation with the design problems of designing special clothes for people with limited mobility, taking into account diseases and defects. [12], Prihodchenko O.V. [13], Saveleva N. Yu. [14], Kozlova E.V. [15] are involved. Also, "ORTOMODA" Shoe design center for special purposes (LLC) "Universal design studio of Galina Volkova" and G.A. The leading specialists of the research and production centers "St. Petersburg Social Scientific and Practical Center for Medical Examination, Prosthetics and Rehabilitation of the Disabled" named after Albrecht were also involved.

I.E. In his research [18], Savchenkov considers the issues of designing clothes for disabled persons with pathological changes. The method of determining the anthropometric data was considered in the research work and a method of determining the quality of the fit of clothes to the figure of the disabled was proposed, taking into account their design.

Based on the above, it can be concluded that the development of a set of clothing for people with limited mobility that meets certain requirements and has a high level of operational comfort and safety is a current urgent task.

The design of flexible clothes for people with disabilities, the design that allows them to provide a high level of comfort and vital activity, is a complex problem, and its solution is an important task in fields such as medicine, biomechanics, material science, confection, construction, anthropology, psychology [16-17].

The role of flexible clothing plays a major role in shaping the effect of rehabilitation, increasing safety, comfort and independence, including performing various household tasks, determining their place in society and the surrounding reality. To achieve this goal, the following tasks have been set:

- determining the contingent for research;
- identification of factors that have a negative impact on the social-personal adjustment of people with disabilities;
- analysis of foreign and domestic experience in designing clothes adapted for people with limited mobility.

The conducted researches show that the development of a project of flexible clothing for people with limited mobility, the design of adaptive clothing and the consideration of height defects in the development of clothing construction have been experimentally and theoretically researched.

Silvert's, BUCK & BUCK, Professional Fit Clothing, Adaptive Apparel, Easy Access Clothing and Izzy Camilleri are the leading manufacturers of all kinds of industrial models of adaptive clothing for people with disabilities of different genders and ages.

The conducted analysis shows that the products offered by the manufacturers have a number of disadvantages, including: the location of the accessories mainly on the back, the layering of the clothing details on the back due to the use of the principle of "repetition of the left and right side details" in the design of the accessories. In most of the proposed models, materials made of wool or synthetic fibers were used for the main material, and the physiological characteristics of people with limited mobility were not taken into account in the construction of all the proposed models.

In addition, the location of the attachment on the side in all products reduces the level of

independence in self-care and causes compression of body parts by the attachment elements or layering of fabrics. In some models of shoulder clothing, the use of integrally formed hem constructions limits the possibilities of movement in a wheelchair, that is, it has a negative effect on the free control of the wheel.

Material and methods. When creating flexible clothing for people with limited mobility, the goal was to study their disability groups and criteria (Table 1.) [19].

TABLE 1. Classification of existing disability groups and criteria

First group	Second group	Third group
Complete loss of working capacity. Violation of important functions in the body. Inability to serve oneself. Life activities require constant external support..	Inability to work normally. Requirement of special equipment or conditions to perform work. Disruption of functions is significantly manifested, but constant care is not required.	Ability to work remains, but health does not allow to perform or continue work according to the previous qualification, requires a reduction in the volume of activity.

This classification makes it possible to identify groups of disabilities and create adaptive clothing for disabled people to adapt to the environment. Thus, the third group of disabilities implies only a slight violation of coordination and movements, which, unlike the second and first groups, minimizes the need to make any changes to the design or technology of clothing [20]. The first and second groups were assigned the task of creating flexible clothing that is convenient for people with limited mobility.

According to the World Health Organization, more than 1.0 billion people in the world suffer from disabilities. This is approximately 15 percent of the world's population. Due to increasing chronic diseases and aging, their number is increasing. According to the State Labor Inspectorate, there are more than 750,000 people with disabilities in Uzbekistan today, of which 220,000 or 29.4% are capable of performing certain types of work. When choosing clothes for people with limited mobility, one should not forget about psychological, ethical and aesthetic aspects, because its main rehabilitation task is to alleviate the differences between people who move independently and with the help of a wheelchair, to give them the opportunity to feel comfortable, and thus to improve the quality of life of this category of people [21].

Taking into account the above points, taking into account that women are the majority among HQChI, in order to identify, analyze and conduct sociological research on the advantages and disadvantages of their current clothes, interviews and questionnaires were conducted among women in "Inclusive Society" and "Mehribonlik" society in Tashkent city and Tashkent region. . 50 respondents aged 17 to 35 took part in it.

In a personal interview, HQCh was determined in terms of percentage distribution of independent dressing/undressing, basic physiological and household needs satisfaction of women. Thus, 39% of HQCh women are able to dress without external assistance, 51% partially use external assistance in putting on and taking off clothes, 10% of respondents dress only with external assistance.

Research results. The survey revealed that there is a demand for comfortable clothes that make the lifestyle of women with limited mobility easier, aesthetically beautiful, and do not harm their bodies. The main purpose of the questionnaire is to analyze the living conditions of women with disabilities, to develop a new set of clothes.

50 women with limited mobility took part in the survey. 40% of the participating women are

housewives, 30% are workers and employees, and 30% are students..

ANALYSIS OF RESEARCH RESULTS

As a result of the survey, it was clear (Figure 1) that 70% of women with limited mobility prefer to wear blouses and 50% tunics. 30% of them preferred to wear T-shirts, 56% suits and 52% shirts. 60% of women prefer to wear wide pants, 68% of women jackets, 24% of women wear wide skirts, and 8% of women prefer to wear short skirts. The questionnaire also asked about the discomforts of women with reduced mobility in different types of clothing, and their answers were as follows: 50% of women said that long skirted dresses interfere with the movement of the wheel in a wheelchair, complicate the process of dressing and undressing, 30% of women say that dresses or blouses without straps and 20% of women % pointed out that the narrowness of shoulder clothes causes great discomfort for women. In the sitting position, it was found that 48% of women were uncomfortable with tight skirts, 40% of women with tight pants, and 12% of men with tight straight skirts..

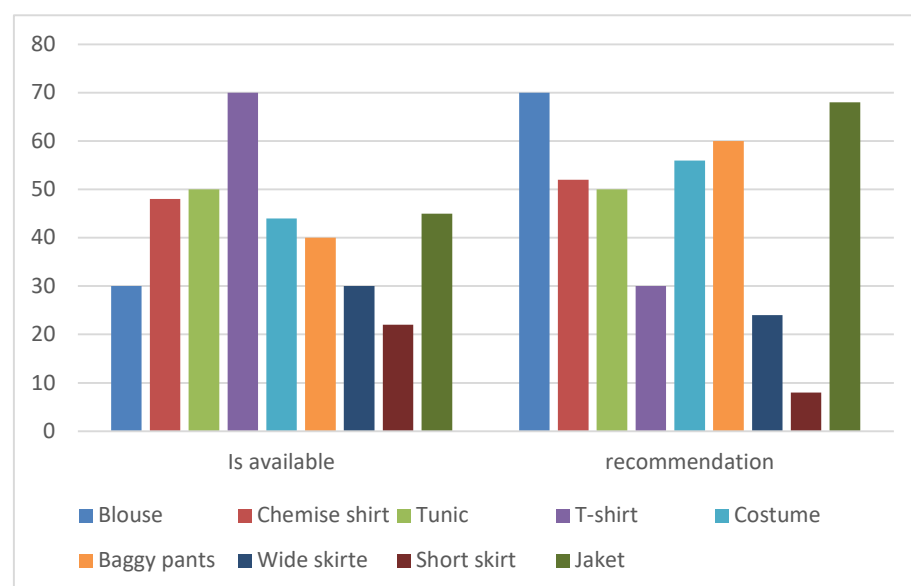


FIGURE 1. Shoulder and back of women with limited mobility clothing needs

The women who took part in the survey were asked what kind of comfort they would like to have in their off-the-shoulder clothing. They said that off-the-shoulder dresses have a pleat in the front, and trapezoidal dresses are more comfortable for them.

70% of women recommended that pants should be wider, 25% should have velcro straps and drawstrings in pants, and 5% should have elastic waistbands. In waistwear, 40% of women said that wearing tight pants, 30% of women said that they wear tight waistwear, and 30% of women said that it was too uncomfortable to wear elasticated waistwear.

When women with reduced mobility were asked which type of fastening they preferred, they preferred buttons and straps.

40% of women suggested shoulder clothes should be light color, waist clothes should be dark color, and 30% suggested warm colors. It was found that 30% of women prefer clothes with a tight silhouette, 30% of women prefer clothes with a straight silhouette, and another 40% of women prefer clothes with a trapeze silhouette.

Dressing styles of women with reduced mobility are more casual and classic, with 64% of respondents saying they buy clothes from indoor markets and 25% from women's malls and make alterations to fit their figure.

In the process of communication with the respondents, the influence of the level of daily life and self-service ability on the choice of clothes was determined. In this case, self-sufficient women choose clothes based on the aesthetics of wardrobe items, comfort during operation.

Another important reason for respondents' dissatisfaction is the quality of the materials used. The most important properties of the materials are a pleasant feeling of touch on the body, ease of washing and ironing, high operational and hygienic qualities.

When choosing fabrics for clothing, 40% of women chose mixed fiber fabrics, 30% chose knitwear, and another 30% chose natural fiber fabrics.

Among the respondents who have partial independence in carrying out usual daily activities, 58% considered comfort as a priority and 42% prioritized fashion direction.

CONCLUSION

Thus, it was found that currently women with limited mobility have a low level of satisfaction with the available clothing assortments. Factors that have a negative impact on the psycho-physiological condition of HQCh women related to clothing have been identified. For further design work, a group of casual flexible clothing sets consisting of jackets, blouses and wide trousers were identified. In the next stages of the sociological research, it was aimed to conduct research on the constructive and functional solution of the clothes chosen by the respondents..

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