



## EVOLUTION AND SOCIAL NECESSITY ASPECTS IN FUNCTIONAL CLOTHING PRODUCTS

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**Abstract:** *The paper presents the functional clothing assortment study results by determining the current areas of its use. It is proposed the thorough study of the clothing product range for people with special needs. The main focus is on disabled people social inclusion which becomes possible thanks to adaptive clothing products. The paper is intended to theoretical knowledge grounding on functional clothing and its production rounds setting. The topicality of the subject is determined by the growing interest of specialists in the field and by the large number, worldwide and local, of people who represent a disability. The paper presents the fundamental notions regarding functional clothing, the modern assortment of functional clothing classification scheme and the scheme of the aimed at assortment design process. The functional clothing products development process stands for the clothes wearing conditions study in the interest of specific technical requirements processing, the dimensional typology data use, the "man-product" system ergonomic research carrying out, the original constructive solutions determining. One of the problems that are trying to be solved in this paper is finding solutions in order to increase the number of products types manufactured while increasing the functional clothing products quality for disabled people. The high-quality functional clothing products obtaining leads to a number increase of constructively made products and technologically manufactured homogeneous products. The design process scheme of clothing intended for disabled people is developed to facilitate the functional clothing products developing process.*

**Key words:** *people, special clothing, people with special needs, design process*

### 1. INTRODUCTION

Modern clothing organically combines aesthetic qualities with functional ones.

By the clothing function is meant its role in the man's life. By the clothing product functionality is meant its correspondence to the practical destination.

Functional clothing products are ergonomically designed as ensembles that have minimal inhibitory effect on movement and provide maximum comfort and performance to the user in the wearing process and/or that may have electronic functionality with communication and telemedicine applications. Functional clothing can be apparel that protects people exposed to dangerous

environments during work or sports activities; outfit that facilitate movement and body balance, improve endurance or reduce fatigue in athletes; attire that performs only the aesthetic function such as improving body shapes [1].

A major problem of modern society is people who have special needs of insurance via comfortable clothing products.

It is known that in the world there are one billion disabled people, eighty million disabled people live in the European Union; and in the Republic of Moldova, the estimated number of people with disabilities is 176.1 thousands, including 10.6 thousand children aged between 0-17 years. Disabled people are 6.6% of the total population in the country and children with disabilities represent 1.8% of the total number of children with habitual residence in the Republic of Moldova [2]. Many of them do not work, live below the subsistence minimum and face stigmatization and discrimination in most aspects of life.

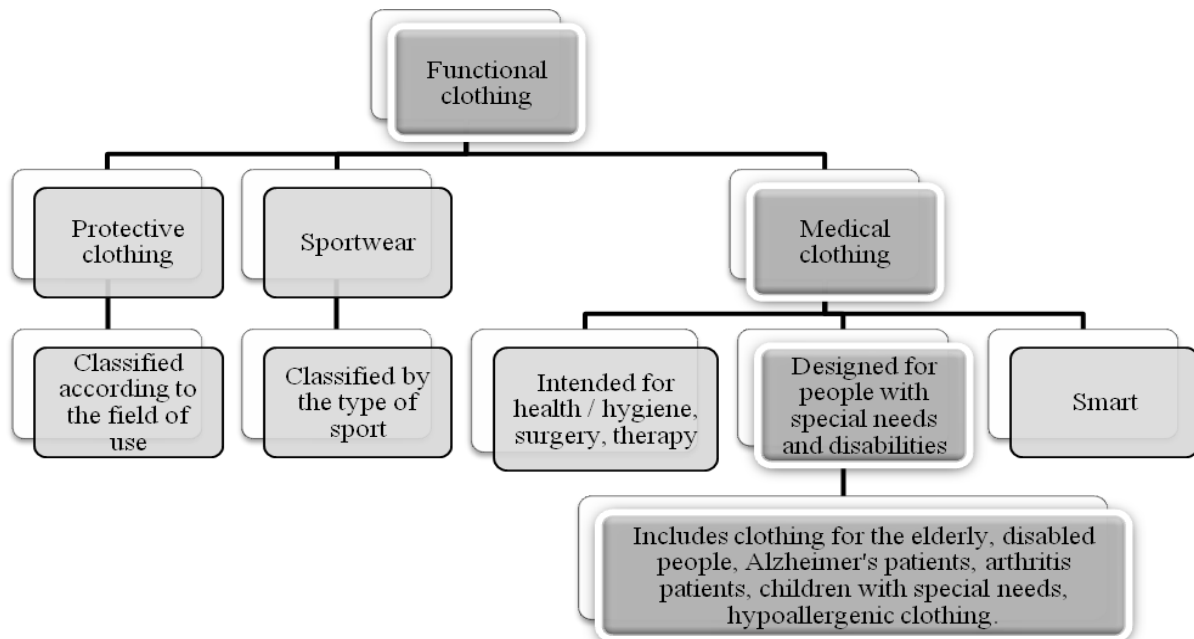
In accordance with the Convention on the Rights of Persons with Disabilities (CRPD), disabled people include those who have physical, mental, intellectual or sensory lasting disabilities, impairments which, in interaction with various barriers, may hinder full and effective participation of people in society on an equal basis with others [3].

The people with disabilities quality of life increasing is a very important society issue both at national and international level. The disabled people group needs continuous support inclusively functional products offering that would allow a much easier social inclusion.

## 2. GENERAL NOTIONS REGARDING FUNCTIONAL CLOTHING

Functional clothing is defined as clothing specially designed and engineered to ensure the predetermined feat and/or functionality needs for the wearer [1, 4].

Based on the information in the literature and in other related fields, the functional clothing modern assortment and areas of use can be presented in the form of a scheme (Figure 1).



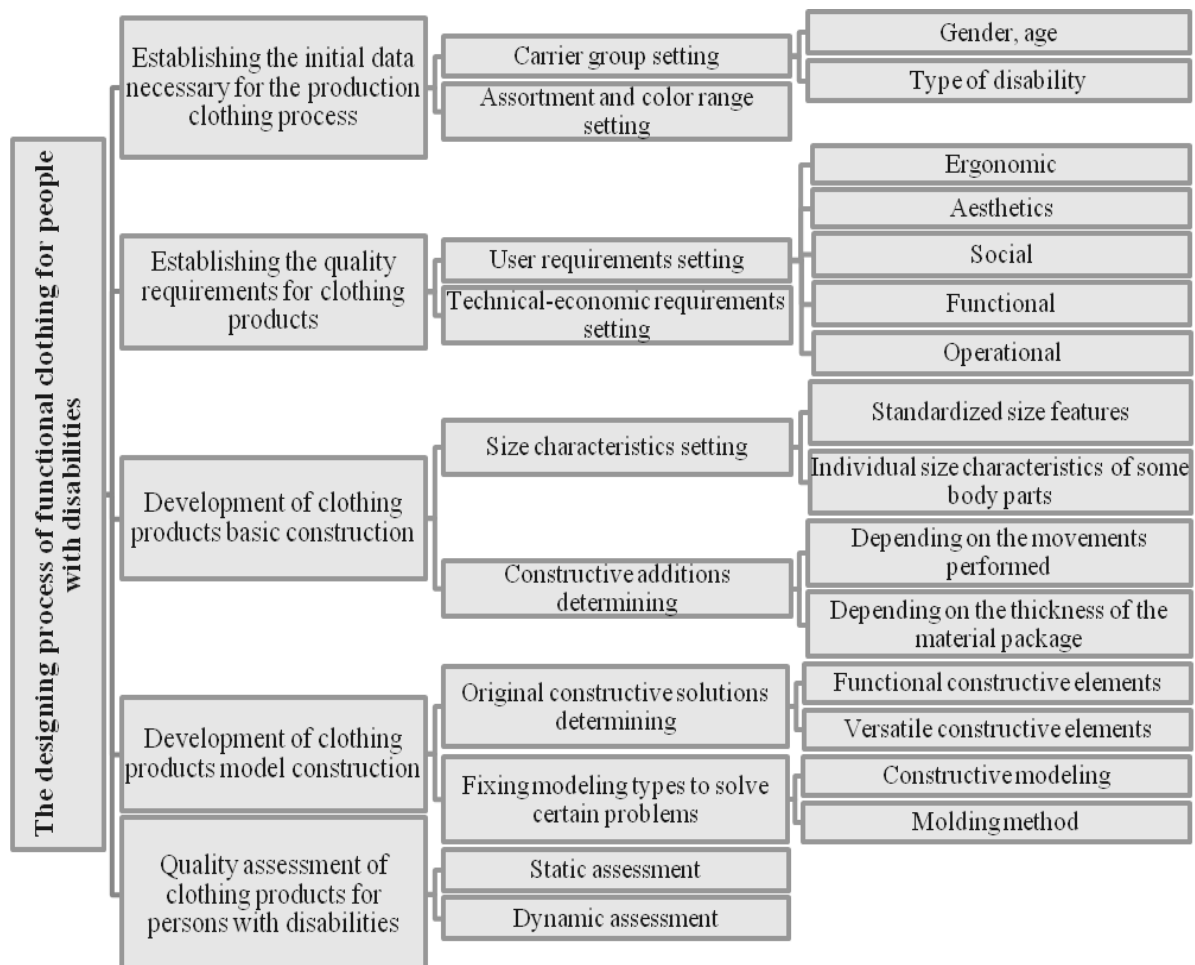
*Fig. 1: Functional clothing modern assortment*

The field of functional clothing for people with special needs and disabilities is relatively new for the domestic light industry. This field is of increased interest to specialists from various areas: textilists, designers, doctors, programmers, etc. The increased interest is argued by the large number of people with special needs at global and local level.

### **3. DESIGN STAGES OF FUNCTIONAL PRODUCTS FOR PEOPLE WITH DISABILITIES**

The special clothing developing process requires a special methodology drawing up; this type of clothing performing strictly determined functions must correspond to a number of requirements and possess predetermined characteristics.

At the design stages functional clothing designers carry out activities for the clothing properties prognosis and responses to these properties at the manufacturing and service stages. The proposed solutions must ensure that the designed functional clothing corresponds to the conditions of operation and manufacture taking into account the complex of requirements imposed by the wearer and the restrictions imposed by manufacturing.



*Fig. 2: Stages of functional clothing designing process*



#### 4. CONCLUSIONS

Functional clothing has the role of increasing the quality of life for people with special needs or disabilities.

The recommendation on wearing functional clothing should take into account the following aspects: its role in the process of wearing, the type of disability, the activities that are necessary to carry out for the wearer.

The development of clothing products for people with disabilities takes into account the fact that disability is complex, dynamic, multidimensional and contested. In recent decades, the movement of people with disabilities, together with many researchers in the social sciences and medicine, has identified the role of social and physical barriers in terms of disability.

The role of specialists in the field of clothing industry, in this regard, is to provide balanced clothing solutions that give a fair share to various aspects of disability.

The modern assortment of functional clothing includes products of protective clothing, sports clothing and medical clothing.

Due to the very wide diversity of types of clothing products, their design must be preceded by the specification of all the properties required by the destination and the operating conditions.

The task of the functional clothing constructive-technological design process lies in the creation of high-quality clothing products with increased ergonomic and functional properties.

In order to develop a unique methodology of functional clothing design, the stages of design of this type of products were established: setting the initial data necessary for the clothing development, establishing the quality requirements imposed on clothing products, developing the clothing products basic construction, developing the clothing products model construction and assessing the quality of the clothing product intended for people with disabilities.

It is proposed to carry out further research which would include analysis and selection of ergonomic parameters that influence the compliance of the article with the operating conditions, the processing of the obtained data and the obtained findings typing in accordance with the requirements imposed on the design situation.

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