PAPER · OPEN ACCESS

Dependent seniors garment design

To cite this article: A L Caldas *et al* 2017 *IOP Conf. Ser.: Mater. Sci. Eng.* **254** 172004

View the article online for updates and enhancements.

Dependent seniors garment design

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Abstract. This paper is part of a PhD research in Textile Engineering at University of Minho and aims to establish an ergonomic pattern design methodology to be used in the construction of garments for elderly women, aged 65 and over, dependent of care. The research was developed with a close contact with four institutions involved in supporting this aged population, located in the cities of Guimarães (Portugal) and Teresina (Brazil). These clothes should be adequate to their anthropometrics and their special needs, in accordance with important functional factors for the dependency of their caregiver, such as: care for the caregiver and comfort for the user. Questions regarding the functional properties of the materials, the pattern design process, trimmings and the assembling process of the garments are specially considered in the desired comfort levels, in order to provide an adequate handling by facilitating the dressing and undressing tasks, but also to assure the user the needed comfort in all its variables.

1. Introduction

This paper describes five important phases of the ergonomic pattern design methodology to be used in the construction of garments for elderly women dependent of care. The first phase refers to the elaboration of the basic patterns for upper body, skirt and trousers, adapted to the anatomical complexion of two elderly groups from the cities of Teresina (Brazil) and Guimarães (Portugal). The second phase refers to the development of the prototypes, with the selected materials, aiming to offer greater comfort to the studied groups. The third phase refers to development of the basic pattern design blocks. The fourth phase refers to determination of ease table. The fifth phase refers to development of test prototypes.

For these five steps, we've quantified the measurements of the body to understand the most common shapes and postures, which have allowed us to drape the garment according to the body shape, compensation of asymmetries and changes in the somatic form. With this data, we intend to identify the comfort requirements (in all its variables) and factors associated with functionality and handling in the proposed clothing.

During the process, in two different moments, the measurements of the elderly women were collected in a seated position, and experimental methods of the measurements were constructed, developing size charts. The size charts correspond to an anthropometric dimension based on other existing ones, that did not contemplate the public in question, since they fit to an age group up to sixty years old. Therefore, the basic patterns design produced, emerging as a principle for the development of the prototypes for validation of the final product of this study.

Interest and importance of studying this specific public results from issues related to the demographic transition, which highlight an increase in life expectancy. This can become an economic and social problem when there are no public policies and programs aiming the growing ageing population. The demographic transition is a result of circumstantial changes from a young population to a position with low mortality and birth rates.