

International Journal of Human Sciences Research

MODELING OF CHILDREN-INCLUSIVE CLOTHING: AN INTERACTIVE AND DIDACTIC PROPOSAL

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Abstract: This course completion work in fashion design training presents the results of the case study, modeling the design of inclusive children's clothing, suitable for people with physical disabilities (PwD), in the interaction of design with fashion, also involves an interactive, educational proposal for the creation of puppet shapes for visual reading of the misshapen body with contributions from exploratory and bibliographic research, started in the 2020.1 semester.

Keywords: Children's modeling; Inclusive clothing; educational proposal.

INTRODUCTION

The development of inclusive clothing starts with the challenge of adjusting children's modeling, suitable for people with physical disabilities, based on the anthropometric reading of the body. Reconcile the theoretical and practical knowledge relevant to the creation of clothing modeling and add the requirements of comfort, wearability and mobility in the design of the garment. Insert the principles of ergonomics aimed at physical, psychological and physiological comfort to meet the act of dressing and undressing, special needs (BROEGA, 2010).

During the Modeling Laboratory discipline, the topic addressed was about inclusive fashion. Motivated by the cause, we were interested in deepening the study and thus the research for the course conclusion work, carried out in the remote teaching system, was designed. The study explores the axis of clothing technology, with the aim of contributing to the creation of clothing fashion for people with physical disabilities and discovering the needs of users with the use of appropriate clothing. The creation and production of clothing requires applying the fundamentals of design in the elaboration of new proposals that meet the different types of disabled bodies. Envisions the social inclusion of the body in fashion

with continuous information that favors people with disabilities (PwD). The work involves bibliographical and documentary research, with a descriptive and exploratory technique, configured in a case study. The methodological context addresses the modeling and making of an inclusive-fashion piece for a female child body, with six years old affected by (PwD). The research also involves the handmade production of "Amigurumi" model dolls, Japanese inspiration, made with the crochet technique, adding a proposal of an educational nature, about bodies with some anatomical alteration and it is understood that the two proposals complement each other in this study. The research is supported by the theoretical references of the authors Cardoso (2008); Braga (2009); Ribeiro (2020); Sabrá (2009); Woltz (2007); Martins (2009); Fernandes, et al (2011).

INCLUSIVE FASHION-CLOTHING DESIGN AND OTHER REFLECTIONS

Design is present in several creative areas and in the clothing-fashion field, the relationship contributes with the fundamentals in decoding information from trend research for product development. especially one that meets the user's needs with a functional, aesthetic appeal, as explained by CARDOSO (2008). Together with fashion, design fulfills purposes of communicating symbols and meanings, affirming interaction, articulated with social, anthropological, ecological, ergonomic, technological and economic factors. From the perspective of BRAGA (2011), "Fashion is a social and cultural phenomenon, of a more or less coercive character, which consists of the periodic change of style". Regarding clothing fashion, we prioritize a specific segment called Inclusive Fashion, where there are demands or segmented niches aimed at less favored users, those with some physical disability compromised by mobility or others of a

mental, bodily, cognitive, sensory nature.

Little research has been identified aimed at children with (PwD) problems. It is noticed that the clothing industry does not feed the interest of making viable the condition of inclusion in clothing fashion for adults and children. According to Sabra (2009), the clothing industry incorporates several processes, initiating a flow from the strategy of thinking about the product, the proposed segment, the appropriate materials, creation and production to meet the different demands.

The issue of physical disability throughout history is a social and cultural fact. However, Fernandes et al, (2011), explains that it is not necessary to report the facts of the practice of exclusion, but to understand when the social rights of people with disabilities were necessary for the recognition of social inclusion. With the advent of the Universal Declaration of Human Rights was decisive for the new changes.

METHODOLOGY

The methodological procedures discuss a case study, involving applied research with the creation of modeling and the making of a garment adapted for people with physical disabilities. The method is applied to the development of a clothing product, a jumpsuit and the creation of amigurumi-style dolls. The bodies express anatomical alteration to communicate the condition of carriers of (PwD), add educational and interactive information in the cause of inclusion of inclusive fashion.

Inspiration comes from the clothing technology axis and became the driving link that motivated the interest in content seized in the Modeling Laboratory discipline in 2020.1. In the condition of remote teaching because of the COVID-19 pandemic, it was possible to carry out the course completion study.

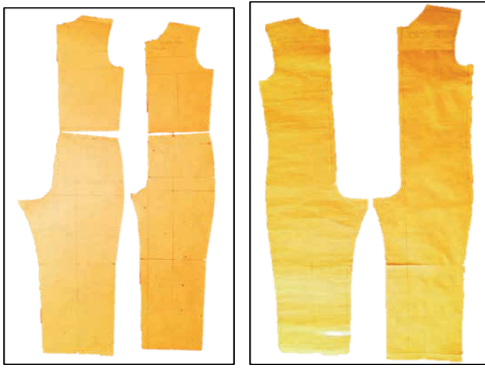
The theoretical contributions in the

elaboration of the work corroborate with the qualitative approach, exploratory technique, involving documentary and bibliographic research, consulted in theses, academic articles, periodicals, website.

Object of observation and direct analysis: a female infant body, aged 6 years, residing in the city of Teresina-Piauí, with the pathology Chronic Hemiplegic Spastic Encephalopathy (ECHE). The disease affects neuropsychomotor development, compromises anatomical changes, the development of upper and lower limbs, causes decompensation in body measurements, leading in some cases to one side being smaller than the other (RIBEIRO, 2020). The handcrafted creation of amigurumi-style dolls depicts bodies with anatomical changes. Communicates educational and interactive questions about the difficulties of properly dressing people with (PwD).

CHARACTERIZATION OF THE ANALYSIS: CHILD MODELING AND BODY MORPHOLOGY

Use of consulted child measurements tables: SENAI and SENAC, were adapted for body measurements, object of study, the bearer of (ECHE). The base molds were prepared according to the corresponding age and numbering. In the sequence, adjustments and modifications of the shape were made, taking into consideration, the body changes. Depending on the anatomy of the body, the bases of flattened molds present an altered silhouette, misalignment of the shoulders, waist and hips, compromised by the condition of hemiplegia, shown in figures 1, 2 and 3.



Figures 1: basics of flat modeling and shape adaptation

Source: The author

Flat modeling starts from the Cartesian theory, in the dimension of the tracing in the form of a two-dimensional rectangle, projected with height and width measurements of the plane. In it, the fundamental lines of the circumference of the body are drawn with straight horizontal, vertical and curved strokes, resulting in the design of the shape of the mold and under the guidance of the table of reference measurements of the human body (MEDEIROS, 2007).



Figure 2: Drawing of the silhouette of the hemiplegic body - front and back

Source: The author



Figures 3: Clothes prototype – front and back

Source: The author.

The making of the prototype is the result of interpreting the design in choosing a jumpsuit, a piece often used by children. Made of cotton fabric with elastane, armhole finishes in ribbed mesh, zipper on the center side of the front, meeting the ergonomic requirements of comfort, wearability and functionality, considering the physical, physiological and psychological aspects addressed by MARTINS (2009) in the study “Ergonomics and Fashion: A necessary connection”. The piece demonstrates misalignment, generating asymmetry, according to the flat modeling and graphic design of the body silhouette, in (figures: 1, 2, and 3). The difference between the right and left sides reflects the ECHE anomaly, altering the movement of the upper limb - arm, causing excess body weight on only one side. It shows changes in the shape of the leg in a shorter proportion and causes anatomical decompensation of the shoulder and changes the posture and structure of the waist and hips, as explained (RIBEIRO, 2020).

The design methodology involves creativity, materials, experimentation, models and verification. In the development of the piece - the overalls considered the elements of this construction extensive to the handcrafted creation of dolls with bodies similar to physical disabilities.

AMIGURUMI DOLL: MORPHOLOGY OF THE MISSHAPEN BODY, AN INTERACTIVE DIDACTIC PROPOSAL



Figure 3: Amigurumi dolls: hemiplegic, wheelchair user and amputee types

Source: The author.

The prototypes incorporate elements of the visual language with: colors, shape, texture, materials woven with soft threads and, when touched, the piece emits tactile and sensory lightness. The idea was to create miniature sizes in the proportion of 35 cm, a type of mobile that is easy to manipulate and demonstrate to the other, the real configuration of a silhouette with a physical disability (PwD). In perspective, creation is part of the design methodology to raise awareness of the cause of social inclusion in fashion. Therefore, the prototypes communicate an educational, interactive visual reading on Inclusive Fashion.

RESULTS

The results were measured in part, given the condition of the COVID-19 pandemic period. The creation of the fashion-clothing prototype attributed to inclusive fashion was tested on the child's body. In view of the confinement situation, all health care and protocols were obeyed in the analysis of the clothes. We emphasize that the child does not have the proper perception and autonomy to

evaluate the clothes and depends on a caring person, in this case his mother. It was up to the caregiver to analyze the results of the clothing. She observed the materials, the design of the garment, tested the way of dressing and undressing with the zipper feature on the front side of the garment. She stated contentment when analyzing the style. She voluntarily expressed the considerations with satisfaction for the completion of the work and did not add suggestions to the product. She concluded by thanking and praising the work proposal. About the dolls, she found the proposal interesting, adding the inclusion of bodies in fashion. WOLTZ (2007), explains in the current scenario, there are advances in legislation on "social inclusion", but we are still far from ensuring the rights of people with disabilities and giving them equal conditions in all social sectors. It is understood that in the fashion system, these issues are starting to be included and it is up to the professional designer to get involved with the cause of inclusive fashion.

FINAL CONSIDERATIONS

In this final topic, we emphasize that there were limitations in completing the cbt work, due to the isolation period. The objective was to deepen the research with other categories of (PwD). Possibilities were researched through the census of the last IBGE survey (2010); analyzed other references of legislation such as the Brazilian Law for the Inclusion of Persons with Disabilities - Law Number 13,146, of July 6, 2015; Decree Number 5296/2004, which considers a person with a physical disability to be one who presents "complete or partial alteration of one or more segments of the human body, leading to impairment of physical function, with congenital or acquired deformity that produce difficulties in the performance of functions".

However, when realizing the idea of

creating the Amigurimi doll, it corresponds to the objective of producing information on the issue of including all bodies in fashion. The purpose is to produce educational and interactive action. A possible development would be to reach the schools of initial series, with didactic-educational action for the children in their formation, approaching the

issues of social inclusion, a contribution of the fashion professional. The doll awakens beyond the message, sensory and even affective relationships, which goes against the playful experiences in childhood. In conclusion, my inspiration remains latent and I will certainly continue this cause.

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