"Barriers-free Life" - an Experience with Fashion Design

Lourdes Luz¹, Lucilia Ramos², Nara Iwata³, Roberto Abreu⁴, Tania Werneck⁵

¹, ², ³, ⁴, ⁵ Escola de Design Universidade Veiga de Almeida
E-mail: luz@uva.br, lucilia.ramos@uva.br, nara@uva.br, roberto.abreu@uva.br, tkatia@uva.br

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Abstract

The Research Group "Barriers-free life" from the Design School at Veiga de Almeida University, RJ, is composed of Graphic, Interior and Fashion Design graduation courses and was created to develop projects to the inclusion of the subject with disabilities. In this aspect, Fashion Design course was involved with research on clothing and products for people with dwarfism, based on the interviews and reports on the difficulty of the acquisition of appropriate clothing to the needs of that individual. This article fulfills its social function in diversity, social inclusion, accessibility and full exercise of citizenship. Our goal is to research and systematize actions that promote in any situation of permanent or temporary disability, the minimum of individuality, independence, accessibility and sociability.

Keywords: Universal Design, Dwarfism, Fashion Design

1. Introduction

Disability is a democratic condition: permeates all ages, genders, races and ethnicities, as well as socio-economic and financial conditions. It can occur at any stage of life and often provides reactions of discrimination and prejudice more or less explicit.

The research "Barrier-free life - an experience with the Fashion design" is based on two concepts: "Universal Design" and "Ergonomics". The first Universal Design, is based on the design of spaces and products targeting their use for a diversity of users, including children, the elderly and people with temporary or permanent restrictions; there are seven basic principles, namely: 1. The fair use, i.e., the "object" to meet people with diverse abilities; 2. Flexibility in use; 3. Simple and intuitive use with easy to understand design, eliminating complexities; 4. Clear and direct the user information; 5. Tolerance for error, the design should minimize possible sources of danger; 6. Little effort in use (minimum fatigue); mobility and ease of use.

Ergonomics is related to daily life, to every object we use, from clothes to furniture, from accessories to architectural spaces. One must consider the man with its skills, physical, psychological, cognitive and cultural partner. It’s directional and aims in this research to help positively transform the conditions for people with restrictions and promoting appropriate spaces for access, scope, accessibility, physical and social sense (inclusion), handling and independent use of size body, posture or mobility of the user.

This research is focused on people with dwarfism and issues arising from the physical and psychological barriers of disability.

2. Dwarfism Concept and Present Situation

According to Aurélio dictionary, dwarfism means "a sharp stature underdevelopment". And dwarf means "person of lower height." Dwarfism is a problem that causes the upper and lower limbs develop less than normal, resulting in abnormal skeletal growth, with normal brainpower. We call as dwarf people who, for genetic conditions or hormonal problems, present height between 0.70m and 1.50m. There are basically two types of dwarfs: those with achondroplasia and pituitary dwarfism.

Achondroplasia is the most common form of dwarfism and can be hereditary or the result of a genetic mutation, which means that people of normal height, even without dwarf ascenders can generate dwarf children with achondroplasia. The most common characteristics are short stature, and small legs and arms out of proportion to the size of the head and torso length. Shortening occurs mainly in the upper arms and thighs. Adults with achondroplasia have a sharp bend at the end of the spine, which has a protrusion. Almost always they have curved legs and may have limits on the movement of the elbows, because they do not fold completely. The hands are small and the legs are short and wide.

The pituitary dwarfism has no genetic cause. It is a dysfunction (inexistency, trauma or tumor) in the pituitary gland that produces impairment in growth hormone production and may also be associated with impairment of the production of other hormones.

The Brazilian Institute of Geography and Statistics (IBGE) has no precise survey of how many people have the anomaly in Brazil, considering that many people still hide themselves in fear of prejudice. Trying to incorporate disabled people into society and reduce the problems suffered by this group, the Quota Law was created in 1991, which did not include dwarfism as special need.

Only from the Decree-Law n.3.298/99, dwarfism was among the deficiencies, which represented a major advance in the inclusion of the dwarf in the labor market.
3. Beauty, Self-image and Self-esteem

Diego Velázquez (1643-1644) portrayed in the "The Fool of King Sebastian de Morra" (Fig.1) one of the most famous dwarfs and fool of the court, but he's not making jokes, but with open legs, impeccably dressed and with great air of tiredness. This painter tried to criticize as these individuals are still seen as objects without own desires, with exclusion of active social life and suffering of large prejudices that justify the mentality of the team.

![Figure 1: painting "The fool from King Sebastião de Morra" from Diego Velázquez](image)

Nowadays, society increasingly discusses differences and the importance of finding ways for a respectful and dignified coexistence.

It is worth quoting part of Antonio Carlindo Câmara article, professor at the Design School of UVA, which invites us to educate the eye so that we can really see the other without being stuck to the stereotype of contemporary beauty.

He said, the culture of modernity, where the body appearance is hostage from demand of a standardized beauty, dwarfs belies this ideal of beauty and invites us to think of the beauty, not in it's banal superficiality, but rather as a creative act which sets the scene to the emergence of subjectivity. Then the body in its organic structure becomes an object of mockery, disdain and contempt.

The dwarf for different reasons is embalmed in a fixed and unique social image and is prevented from creating their own image. With this, the dwarf becomes a kind of "mutant" organic incapacitated.

Beauty appears when dwarf begins to see, to feel, to find his own talent and competence. In the next examples the dwarf can produce beyond what society and culture await from him. These acts of creating the symbolic function can enable the transformation of dwarfism image of this social and cultural setting where self-recognition allow the condition of being, feeling, thinking and doing. (Fig. 2) Instead of being a syndrome or a fun object.

![Figure 2: Actress and model Priscila Menucci, 91 cm high](image)
It is necessary to change this scenario and provide different scenes and moments to appear the beautiful way of being of each one. "The dwarf belies an idealization of beauty and invites us to think, not in its superficiality, but as a creative act which sets in scene the emergence of subjectivity.

Gouveia et al (2005) observes that self image expresses the perception that the person has of itself and its reflection in comparison to the return of feelings, thoughts or actions in their interpersonal relationships. Sapountzi Krepia et al (2001 apud Silva, 2004) mentions that when one talks about self-image, refers to the reflection that each sees when positioning in front of his "inner mirror" and the feelings and thoughts generated by this view. The author also points out that organic diseases that affect the body structures can change a person's image. Depending on the emotional significance of this change for the individual, they may change the treatment of the society to the person causing mainly changes in his self acceptance standards in his cultural development, and in his relationships. Thus, the self-image directly affects the self-esteem of the individual who is strongly linked with the joy of every human being.

What we realized is that the human being may be able to create their own identity, promoting a tension within the limits of traditions. The human being creates and recreates himself with clothes; while selecting the shapes and colors that will cover and engage his body, suits his figure to the real world space or to his imaginary stage. The perception people have of their self-image in the mirror may be deeply attached to some norms of society, considering they are linked to the demands of sociological rules of form and appearance. Self-esteem refers to how the individual chooses his goals, design his expectations, accept himself, and the others values (Andrade Souza Minayo, 2009).

It is also related to self-confidence, as people with good self-esteem becomes more confident on the decisions to be taken. At this point we see the direct link with confidence in its potential of being and doing what is expected within a social group. Brandom (1995 apud Andrade Souza Minayo, 2009) states that "the individual experiences a lie when distorts his own reality". When there's a balance of this intimate experience, the result is positive, generating a balance of the inner self with the world, good self-esteem requires that the inner self is in accordance with the I manifest in the world (Smith, 2004).

4. Body Design

Throughout interviews we found that dwarfs had relevant issues of self-esteem related to their appearance and an subject was always present on female conversations: How to be an adult in that little body and often with inadequate clothing acquired in children stores?

Clothing (Saltzman, 2008:305) is an intervention element of the user's body morphology and design(er) must provide that the result will end creating a new condition where this design exists and is expressed as a mode of adaptation to the social environment in which it operates. Sice we study the people with dwarisms, we understand that the production of clothes on a large scale would confront a relatively small demand if we consider the number of women belonging to this group and the purchasing power of them, on the other hand if we consider it a market niche, one can see that clothes as a design product have an important role to include these people, who want the feeling of belonging or, in other words, they want to "be fashionable".

If the relation from clothes and body should be understood as a measure of comfort to the user, it is not compatible with a woman of 20, 30 or 40 years to use children's clothing. As Martins pointed (2009), creation teams should be committed to free the body from its limitations. It is essential to manage the appearance.

The body (Saltzman, 2008) adopts several strategies in the field of clothing and we believe that the fabric is the material that modifies the surface of the body, which in this case is quite far from established standards, as if it was a new epidermis. If there are features that allow us to create an expansion movement in the tissues that increase their elasticity, so that the garment fits into bodies of different sizes, silhouettes and ages, it is perhaps here that we can find a first answer to wear, cover, insert these people of dwarfism and not necessarily in the mold or cut. (Figure 3)

As Suzana Barreto Martins (2008: 323) says "dressing and undressing are related actions, a priori, with the ease of handling, combined with the physical ergonomic index that evaluates anatomical features, anthropometric and biomechanical".

![Figure 3: Human body diversity](Image)
We hadn’t carried out yet a deep field research over a modeling related to dwarfs due to the anthropometric diversity observed in this segment. It is considered that, given the varying heights, shapes and characteristics of the dwarves, this should be a complex task that requires a lot of time, and this is one of the reasons for the study.

By focusing on Fashion as a direct path to enhanced self image and social cooperation related to the inclusion, we expect that future case studies can establish metrics, visual/aesthetic and spatial guidelines for the realization of garments and accessories more coherent and precise to characteristics and needs of dwarves.

5. Women's Fashion and Dwarfism

In Fashion, there are materials to solution all demands related to clothes and accessories. The development of current projects, care to physical and psychological aspects of their users. When we observed the clothing difficulty of women with dwarfism, the research was directed to a qualitative axis with direct interviews and access to social networks searching for more information. (Figure 4)

**Figure 4:** Natália Cruz (1,38m), images from her Instagram profile @minilookdodia

- **Silhouette Stretching:** It was observed that the monochrome productions create a horizontal line in the visual. By coordinating pieces always based on the same tone (light or dark), we don’t create sharp cuts that flatten silhouette.

- **Non-infantilization:** Ruffles, bows or children’s figures have been identified as not appreciated elements among the consumers, so they get a children’s picture, misguided, highlighted by short stature.

- **Balance of the picture:** We must call attention to important points of the body as well as shoulders and neck. Using this kind of “vanishing point” deviates attention from the rest of the body; although this observation, the use of smaller lengths, create a longlineal appearance, so shorts and short skirts and minis are approved.

For accessories the following observations were scored:

- **In footwear** showed greater efficacy for the harmonic composition that models that hide feet, because, the higher the front covering the toes, lower is the user’s appearance.

- **Accessories in general:** the use of large pieces, earrings and necklaces, can create imbalance in the figure and take exaggerated proportions.

6. Case Studies

With the expansion of research, studies have been made to analyse the existing biotypes diversity, and creating some projective “rules” to be applied in the construction of the image of people with dwarfism.

6.1 Laura Marques

Born with dwarfism, living in Teresina, PI. Laura has great difficulty to get clothes that fit her biotype, using some children items, making adjustments in adult models or using tailored pieces.

It was made an initial survey of Laura measures, namely: bust, bust height, bust separation, waist, hips, back center, leg height and arm height.

We developed two pieces, a coat in mousseline and legging pants with elastane. Although simple items, the foundation will serve so that other clothes can be developed within the same structure, with different detailing.

In this case we chose an extensive modeling to facilitate movement. Bateau neckline and sleeves that fall into flared cascade brought lightness to the piece.
6.2 Patrícia Scherer

Born with dwarfism, living in São Paulo, SP. This dress was proposed for an inclusive fashion contest in São Paulo by the student Claudia Gordilho. The piece was mounted with a greater margin of seam, to facilitate possible adjustments. It's an elegant production, balanced by the predominance of black, which elongates the silhouette and avoid infantilization ideas; the effect of vertical stripes lengthens the silhouette leaving longilineal appearance. Accessories are in suitable sizes to draw attention to the top; zipper puller which facilitates handling the dressing, internal reinforcement rubber band to give more support, denim fabric with elastane, providing comfort and convenience to wear, above the knee length visually lengthens the silhouette, black tights, in the same tone of the shoe to leave monochrome production and create a vertical line in the visual without sharp colors.

6.3 Viviane de Assis

Born with dwarfism, TV producer and dancer in various samba schools in Rio de Janeiro. The purpose of this case study was to model clothes for presentations; simpler than fantasies, but with all the glamor of samba, and mobility for the development of movements. We chose a leotard or body, with pronounced neckline in the back and closed in the front. The bottom was woven into "ponto alto" and the upper part em "ponto escama" to give volume to breasts area and draw attention to the shoulder region. It was an attempt to counteract the silhouette related to the hips.

The technique used was the crochet, unusual texture method for the carnival that could add all these concepts and needs, using biodegradable materials and clean production methods, with less energy expenditure to support our sustainable concern. The "ponto alto" are flat and basic points, and "ponto escama" is a fantasy 3D point offering a differentiated texture and volume, strategically located in parts that the customer would like to stress.

We used two types of yarn: yarn to crochet, with a mixture of cotton and other (wire coming from a reverse logistics process) and a strand of lurex 100% polyester with metallized treatment, used mainly to finish and to meet the need of brightness.

Clothing/fantasy, presented a good performance, favoring, according to the user, the movements and the presentation of the dance, as the fringes across the back provided extra movement and sound to the presentation.
7. Final Remarks

At this stage, the research focused on real life characters with dwarfism, that by their actions need to emphasize a good image and thus make the clothing the construction of a self-body, which creates its identity by identifying with clothing. The goal wasn’t create a specific collection or models for one person. With the expansion of this research we intend to get other case studies so that the diversity of biotypes can become projective guidelines to be applied to metric, visual/aesthetic and space aspects in the realization of garments and accessories for people with dwarfism.

It sought to maintain the image corresponding to a character as a figurative assembly working their self-esteem in search of beauty and fame. However, this is an ongoing process, one needs to keep a constant movement changing his self-image that is always out of reach. In Fashion, creation does not mean adding something totally new to the world, but it means to make clear the contours of a particular mapping of something that is already there, which is already part of what is usually taken as a desire among that group. That’s why creative process is so complex; one must imagine and recognize the field of characters for whom we created and they live both in the world and within themselves.

Fashion can work as a tool of transformation; clothing as an identification tool. Allowing create up and redo up later in a continuous coming-to-be. Fashion design applies on the process of dressing a creative movement of new ways of living, more attuned to wishes and freedom.

References

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