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SUSTAINABILITY OF CHILDREN'S CLOTHING COLLECTIONS

Purpose. *The fashion industry evolves by balancing exclusivity with affordability in clothing products. Its development has marked the transition from bespoke tailoring to mass consumption. Today, in an era of active communication and the globalization of aesthetic preferences—set against a backdrop of distinct ethnic and cultural identities—four clothing categories are distinguishable: Haute Couture, Prêt-à-Porter, "Half-way" fashion, and mass-market fashion (which caters to two primary consumer segments). Sustainable design, the use of eco-friendly textiles, the circular economy, ethical production, waste reduction, and the promotion of responsible consumption are the key development directions and factors influencing garment design. This study analyzes methods for the sustainable artistic design of children's collections, considering fashion trends, consumer segments, and the physical and functional obsolescence of clothing.*

Keywords*: collection, clothing, sustainability, fashion industry, children.*

Reducing the environmental impact of textile products throughout their entire lifecycle is one of the environmental strategies outlined in the 2022 proposal for the Ecodesign for Sustainable Products Regulation [1]. Current proposals aim to address this starting at the artistic design stage—specifically by applying zero-waste, modular design, and upcycling (or creative recycling) principles, and by creating designs that ensure durability for both premium and accessible fashion segments.

Objectives. For children's clothing, the issue of fit—driven by rapid physical growth—leads to the product becoming obsolete much faster than through actual physical wear and tear. Design adapted to the duration of physical wear of clothing is one of the main objectives in clothing creation and sustainability strategy. Analysis of consumer group segments and cost categories of clothing products will contribute to highlighting the characteristics of clothing design, materials and processing technologies.

Methodology. Analysis of bibliographic sources and identification of the key factors contributing to the development of clothing collections characterized

by high durability and lasting physical and aesthetic appeal. Development of a children's clothing collection comprising seven outfits—designed for nursery-age girls and boys—to serve as the basis for the study and the pursuit of the proposed objectives.

Research results. To maintain market competitiveness and strengthen consumer trust, global fashion brands must address a multitude of challenges, including upholding human rights, assuming environmental responsibility, complying with legal requirements, managing economic uncertainty, and adapting to shifts in consumer mindsets and behaviors. Segmenting the fashion industry based on product exclusivity and price accessibility is a key factor in developing clothing collections. The fashion market is highly diverse, characterized by a wide range of products, consumer groups, and heterogeneous organizational structures. Broadly speaking, it can be segmented into the Elite/Luxury and Premium segment and the Accessible segment.

The elite fashion segment is represented by designer brands, which are typically divided into "Luxury" (elite fashion) and "Premium." Although both entail high price points, it is important to note that the terms "luxury" and "high-end" are not perfectly synonymous; their value transcends mere financial cost, being defined instead by exclusivity and craftsmanship. The elite fashion segment comprises three categories of pricing or market positioning—characterized by specific design features and aesthetic concepts—namely: Haute Couture, Prêt-à-porter, and "half-way" fashion. The accessible segment sits at the base of the pyramid, encompassing the "mid-range" and "fast fashion" categories. This accessible segment is likewise characterized by three categories of pricing or market positioning: Prêt-à-porter, "half-way" fashion, and mass-market fashion.

It is necessary to mention the aesthetic characteristics and manufacturing method of the cost or marketing categories of Haute Couture, Prêt-à-porter, Half-way, mass-market clothing as follows:

- *Haute Couture fashion* is characterized by the use of luxury materials and extreme attention to detail to meet the unique, individual preferences of each client. The products are characterized by being at least 70% handmade.
- *Prêt-à-porter fashion* sits at the intersection of "haute couture" exclusivity and industrial production; this segment offers garments that are not made-to-measure yet maintain high standards of tailoring and materials during their creation. To preserve an exclusive character, production is limited, which justifies the high price point.
- *"Half-way" fashion* represents an innovative alternative to ready-made clothing design, offering an intentionally unfinished—or "half-finished"—

product that invites co-creation between designer and user, leaving room for user intervention, personalization, and engagement [2].

- *Mass-market fashion.* Currently, the fashion industry is predominantly oriented towards large-scale consumption. The mass-market/fast-fashion segment offers "ready-to-wear" products that democratize trends launched by luxury brands. Companies in this sector analyze the popularity of new styles before releasing their own versions, utilizing affordable materials and streamlined production technologies to keep prices low [3].

An interesting aspect of current consumer behavior is that the majority of consumers do not limit themselves to a single category, often engaging in a mix across various segments [3]. Furthermore, "mid-range" and "fast fashion" brands within the accessible segment should not be overlooked. These brands frequently prove far more agile in adopting new developments and trends, thereby managing to attract and entice even the clientele loyal to the Luxury or Premium segments [3]—especially given that, according to the 2025 report "Luxury in Transition: Ensuring Future Growth," the sustainable growth of the fashion industry hinges on quality, sustainability, craftsmanship, and long-term value.

The lifespan of clothing items—determined by the physical wear and tear of fabrics and seams resulting from use and maintenance—varies depending on the type of garment. Thus, in the case of items in the outer layer, the average lifespan can vary between 10 and 15 years, while for products in the first layer it is generally between 3 and 7 years. These values are influenced by several factors, including the fibrous composition, the type of clothing item, the characteristics of the textile materials used, as well as the wearing and maintenance conditions. Children's growth rates significantly outpace the physical lifespan of their clothing, often leading to the garments being discarded before significant wear occurs. Against this backdrop, the practice of passing on or donating children's clothes between families is becoming increasingly common, helping to extend the garments' lifecycle and reduce the consumption of textile resources.

The elaborate clothing collection is intended for nursery-age children (fig. 1). It is necessary to mention that for the development of children's clothing, the age-specific conformation and hygienic requirements are initially analyzed to ensure comfort, physiological and psychological development characteristic of the age. Between the ages of 2 and 3,5 a child's physique changes as the neck lengthens, causing the shoulders to appear lower and broader. The abdomen remains visibly rounded, and the shoulder blades are prominent. The spine begins to develop its characteristic S-curve, and posture tends to lean slightly backward. Children begin to walk, the movements are not always confident enough, but quite active.

Nowadays, a child's wardrobe is far more extensive, featuring outfits for special occasions, festivities, and sports activities—even as early as the nursery stage or between the ages of two and three-and-a-half. Children of this age are highly active, engaging in various activities and workshops at kindergarten or at home—whether under the care of a nanny or a mother—and participating in family celebrations from an early age. The exclusivity of clothing for preschool-age children is formed by the attitude of the little ones towards cartoon characters, family celebrations and the clothing of adults, mother, father, brother, sister, as well as the attitude of the parents towards the little ones who are seen out of great love for them, often as certain characters.

The artistic concept behind the children's collections is likewise guided by principles of sustainability, durable design, zero-waste practices, consumer health safety, eco-friendly production, and social responsibility. Key sustainable design methodologies employed include upcycling (via deconstruction and reconstruction), modular and multifunctional design, texture manipulation, and controlled imperfection. Aligning with fashion trends that emphasize texture manipulation and controlled imperfection, a clothing collection for nursery-aged children was developed; the first and third outfits (Fig. 1a, 1c), in particular, feature distinctive accents of shape and volume. The layering of clothing pieces used as a concept is presented in all the outfits of the collection. Transparent materials of clothing outfits (Fig. 1a, 1e) contribute to amplifying the feeling of festivity and elegance. The collection is positioned within the accessible fashion segment—specifically the mass-market category—and consists of ensembles that allow the individual garments to be mixed and matched in various ways.



a b c d e k m

Fig. 1. **Collection for children (girls and boys aged 2–3.5 years) – nursery age**

Conclusion. An analysis of the fashion industry and the specific design aspects of children's clothing allows for the following conclusions:

- The participation of young children—including those of nursery age—in daily activities and various festivities has contributed to a more diverse range of clothing designed for them. An increasingly evident trend involves adapting and replicating adult clothing elements in a form suited to children's anatomical and functional characteristics. For instance, while a classic men's suit consists of a jacket, trousers, a waistcoat, and a shirt, the version intended for young children—including newborns—might take the form of an ensemble comprising a romper, a waistcoat, and a jacket, featuring a loose cut and soft construction to ensure comfort and freedom of movement.
- Children's clothing will span all price categories: Haute Couture, Prêt-à-porter, "half-way" (mid-range), and mass-market. Mass-market apparel will undoubtedly be in highest demand, implying that the garments will feature basic designs or the standard product assortments typical for this consumer group. At the same time, stylistic accents are not excluded from this price category. Less common, but in private conditions and as unique clothing upon individual request, children's clothing can also be made in the Haute Couture, Prêt-à-porter, Half-way concept.
- Creating ensembles within clothing collections extends the aesthetic lifespan of individual garments by involving the consumer in the personalized styling of outfits—effectively adapting "Half-way" fashion strategies for the mass market.
- Sustainability in children's clothing can be maintained by developing collections based on wardrobe staples such as T-shirts, tops, trousers, shirts, etc.
- The design of the outfits is recommended to last 2-5 years so that the practice of passing on or donating children's clothes between families can continue.

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