

# A Study of Ethical and Environmental Issues in the Textile, Clothing and Fashion Industries

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**Abstract:** This study highlights various aspects and concerns of consumers', producers' and merchandisers' regarding ethical and environmental impacts of the textiles, clothing and fashion industries starting from the design process to the end of product life cycle. Throughout the five discussed stages of textile products life cycle, it was found that the common factor among all stages and considered for developing solutions tackling its wastes is the "Material". The design, style and fashion trend of textile products are considered powerful forces of all points related to environmental issues related to this industry. Printing, Dyeing and finishing operations are some of the significant procedures conducted as part of textiles and clothing coloration and design. These methods would employ synthetic polluting materials and/or consume high amounts of natural resources. Consequently, designing and planning of textile products should develop sustainable coloration schemes. Organizing laws and regulations are essential to consolidate and regulate all these aspects including manufacturers. It is concluded the relationships between addressed factors play effective roles on the environment.

**Keywords:** Social, environment, Consumer, Health, Fast - Slow - Circular Fashion, Branding.

## 1. INTRODUCTION

Fashion, clothing and textile industries have been increasingly growing in the world to include various products, materials and processes. According to Business insider, 10% of the world's carbon emissions is from the fashion industry which is considered the second highest polluter in terms of water consumption and microplastic wastes. The fashion industry is accountable for causing some of the worst consumption practices out of individuals by strengthening trends for overconsumption throughout society [1].

Clothing and textile industries as well have had negative impacts on the environment pushing companies to confront these issues by working on the production of eco-friendly materials, considering the recycling of the produced materials and employing sustainable processes. Especially, that these products are for everyday use. It was reported that around 60% of the people have bought more garments in 2014 than 2000 and 85% of the textile products were wasted [1]. These industries' negative ethical and environmental impacts urging for a solution to this complex problem.

Previous research studies reviewed some aspects of environmental impacts of textiles and fashion namely: unsustainable process and materials besides the sweat shop factories and workshops [2]. It has been noticed that there has been an increase interest

in ecological, ethical and health/medical values. Therefore, this study is concerned with ethical and environmental aspects relevant to textile and fashion industries. It aims at conducting a comprehensive investigation about sources and precautions and gaps in this area in order to provide all these aspects to textile producers and designers. It highlights these problems and solutions in order to outline roles and impacts of all driving forces playing role in these industries i.e. consumers, academics, professionals, manufactures and merchandisers (see Figure 1). Nowadays, "Eco" friendly fabric or fashion or clothing is a term being established to have these products of everyday use for all people rather than being a matter of choice.



**Figure 1:** Stages of textile products life cycle accompanied by substages of negative impacts on environment.

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## 2. MAIN ETHICAL ISSUES AND ASPECTS OF TEXTILES, CLOTHING AND FASHION INDUSTRIES

### 2.1. Design Stage

Design strategies that would tackle the negative environmental impacts of textiles and clothing industries were discussed and investigated. The most effective strategies for decreasing environmental impact of production and consumption and increase consumer interest are: Slow fashion, Halfway products, Modular structure, Co-creation, Design services, unique design. In the second level, Multiple life cycles, Customization, Local production and Services for longer or intensive utilization were found effective [3].

### 2.2. Manufacturing and Making Stage

#### 2.2.1. Materials

Synthetic materials used in textile industries cause destructive environmental effects. Therefore, research studies have been conducted investigating replacing synthetic materials with natural ones [4].

Mukherjee, S. discussed in 2015 addressed various aspects of textiles and fashion industry related to producing ecological footprints and pollution throughout the production stages [5]. All negative impacts due to fiber production, natural fiber farming, synthetic fibers production, pollution of resources such as land, water and air, synthetic dyes, packaging were discussed.

#### 2.2.2. Industry Speed

Fast and slow fashion industries are two approaches used in producing clothing, textile and fashion products. These have different impacts on environment; fast fashion is a model of producing mass quantities of clothing products of low quality or short life cycle copying high street fashion products at low budget, on the other side slow fashion products are more sustainable made in limited run-in long time using as natural materials as the manufacturer can. Slow fashion considers the materials used, laborer and environment. In other words, it takes into consideration all aspects and lifecycle of the produced products. For the laborers and craftsmen, it gives them healthy environment and employ their gained skills. The materials are sourced locally. It is not following fashion trends, so it is available with limited collections in small shops. Therefore, ethical fashion would be an alternative term for slow fashion [6].

It is obvious that fast fashion has significant negative social and environmental impacts. Brewer, M. suggested the vitality of legal reforms to improve

sustainability in fashion and textiles industry processes including sourcing, production, distribution, marketing, and consumption practices.

Anders Haug & Jacob Busch argued that teenagers who are always considered as responsible for using fast fashion products, on the contrary these are victims of this industry. As they don't have complete transparent image and knowledge about the production processes. Two other more effective sides that could support. These are organizations and media. Responsible organizations for fashion and clothing industry should make all important information available through reasonable labelling. Moreover, media and high fashion producer would drive the industry towards safe production and the consumers towards ethical fashion which is defined by them i.e. to make ethical fashion fashionable [7, 8].

#### 2.2.3. Social Aspects and Environment

Unfair working environment is one of the issues obvious in the textiles and fashion industries. This is considering vulnerable women, children and men [5].

A research study investigated the consumers' social norms and environment concerns and their relation to environmental marketing claims i.e. extrinsic and intrinsic. It was found that both social norms i.e. injunctive and descriptive have higher effect on eco-friendly consumer behavior i.e. purchase intention than environmental concern. These findings confirm that society behavior would have more impact on peoples' purchase intention than personal concerns towards environment [5].

Attitude, subjective norm, and perceived consumer effectiveness PCE show significantly positive effects on environmentally friendly apparel EFA purchase intention, while perceived behavior control and EFA knowledge enhance the relationship between attitude towards EFA and EFA purchase intention [9].

There was found contradictory relationships between consumers knowledge and behavior towards the purchasing eco-friendly apparels and textiles. Yiwen Zheng & Ting Chi found poor relationship between consumer's purchase behavior and level of knowledge towards environmentally friendly apparel [9-12].

### 2.3. Pre-Use Stage

#### 2.3.1. Labelling

Eco-labelling is introduced in Europe since 1992. Several research studies have been conducted

concerning the eco-friendly consumer behavior affected by green packaging and its labeling. Clothing protection factor labelling has been introduced to provide indicator of clothing protection to prevent from skin cancer. These aspects need reliable measurement systems to get acceptance by consumers in order not to diminish like thermal textile products [13].

Beard, N. investigated factors affecting consumer response to branding and marketing of eco or ethical fashion. Eco-fashion business firms were suggested to consider in the future to set realistic and attainable targets in transparent and clear view. A variable wide range of textile and fashion products satisfying the consumers' needs are recommended. Establishing ethical fashion programs in educational institutions would enhance the new generations recognition of the eco-fashion importance [13].

Salahuddin and Lee highlighted the importance of revealing the microfiber components used in the textile products' label to support the active and pivotal role of consumers in considering the effective laundry processes in order to lessen the negative impacts on the environment [14].

### **2.3.2. Consumer Attitude and Orientation Towards Fashion Trends**

Consumer involvement in adopting new fashion trends was found linked to three factors i.e. self-realization, comfort, and social acceptance which takes place according to contradictory social and personal aspects. Moreover, positive and negative emotions of happiness and well-being and anxiety respectively are expected from the consumer when offered new fashion trends. It was confirmed that social motivation on involvement with fashion vary according to socio demographic characteristics [15].

Researchers have signified fashion consumer orientation to highlight differences between style orientation, fashion orientation. A study of style and fashion orientated consumers found that enhancing sustainable attitude could be via style orientation rather than fashion orientation. Besides, both were found correlated to hedonism and materialism which are negatively affecting sustainability [1]. Gupta *et al.* proposed to market the style orientation approach more than fashion orientation to revive slow fashion enhancing sustainable clothing industry.

Another view of Consumer fashion orientation considered consumers as one of these categories'

tradition-oriented/culture conscious, economic-oriented/price conscious, convenience-oriented/time conscious, appearance-oriented/fashion conscious consumers.

Fashion leaders and followers were investigated. And it was found that fashion leaders are more likely to accept and purchase exotic leather apparel products than fashion followers [16]. Beaudoin, P. *et al.* discussed the attitude of fashion leaders and followers towards local and imported clothing and found that the first category is more attracted to exported products, however the latter category is linked to the imported fashion products [17].

### **2.4. Usage Stage**

Sustainable consumption of textile products would be focused on Laundry and care of textile products. A fabric of fiber content 65/35 polyester/cotton blend with durable press finish was found saving 64% of the CO<sub>2</sub> produced from cotton fabric. Hydrophobic fibers were found consuming less electricity in tumble drying as it carries low amount of water after spinning [18].

Other approaches related to human health and well-being due to using certain types of textiles were investigated by researchers. This field would include functional textiles for environmental adaptation, performance and protection [19].

### **2.5. Post-Use Stage**

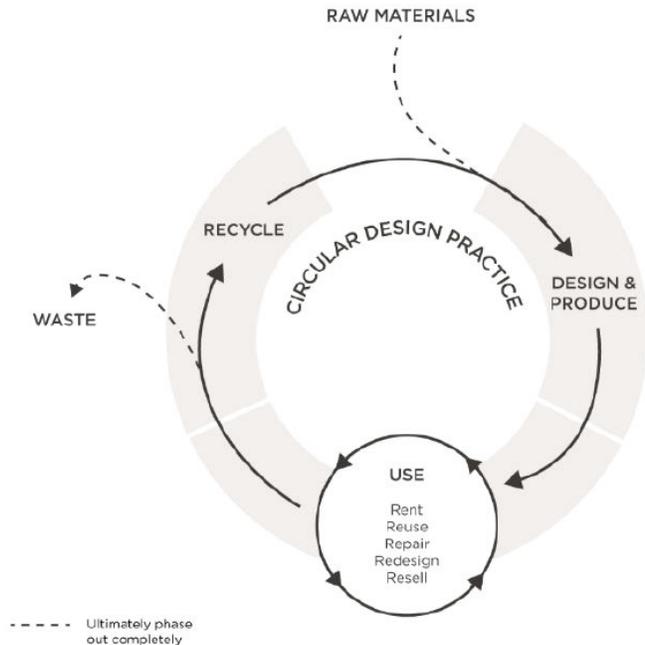
#### **2.5.1. Circular Fashion**

Earley, R. investigated the expected circular speed cycle of fast and slow based on the individuals' and users' clothing's scenario and beyond this [12]. Around 1% of clothing products are recycled, therefore the textile products waste could be around 13 kg per person.

Circular fashion is one of the suggested approaches for preserving materials used as it is based on designing out waste and pollution by improving the products' durability, suggesting reusing, recycling, and natural processes of materials. It is believed that this approach and method of manufacturing textile and fashion products could affect the environment positively [11].

In 2020, 64 international fashion companies including well-known brands such as M&S signed an agreement as part of their commitment to Circular Fashion Systems of around 10% of the global fashion

market. The main areas of the agreement are: Cyclability, collecting, re-selling and recycling pre-used items [10].



**Figure 2:** Stages and concept of Circular fashion Industry [11].

Keith, S. and Silies, M. outlined a proposal of a model for producing Scottish sustainable (luxury) textiles employing the pre-consumer waste [20].

### 3. CONCLUSIONS

In this study, the aspects of ethical, environmental and ecological issues in the textile, clothing and fashion industries were highlighted. It is evident from the study that all consumers, producers and merchandisers have a role to play in these issues. The environmental issues start with the design targeting the consumers and selecting the materials type which would affect the life cycle length. Coloration processes including dyeing, finishing and printing are affected by the design made initially by the designer. These processes would cause over consumption of natural materials and/or resources. Therefore, the style and design of the product made should consider the environmental impacts of their planned scheme. Other factors related to humans involved in the workshops and factories are suggested to be considered during the making processes to fulfil fair and well environment for all workers. Marketers were found having a responsibility in directing the consumers who have been always being blamed for ruining the environment because of their consumption and behavior. Therefore, the industry

speed and circularity are to be investigated to balance consumer needs and safe environment. Public and governmental organizations along with academic programs dedicated for supporting all these aspects are proposed to regulate and raise the awareness among all parties involved in this matter.

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Received on 12-01-2021

Accepted on 10-02-2021

Published on 04-03-2021

DOI: <https://doi.org/10.31437/2415-5489.2021.07.2>

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