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**Design Upgrade of Some Selected Evening Gowns as a Sustainable Method in the
Fashion Industry**

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Abstract

Purpose: The study sought to achieve sustainability in the fashion industry through the redesign of outfits for some selected evening gowns.

Methodology: The study adopted a desktop methodology. Desk research refers to secondary data, or that which can be collected without field work. Desk research is basically involved in collecting data from existing resource; hence, it is often considered a low - cost technique compared to field work. The study relied on already- published studies, reports, and statistics. This secondary data was easily accessed through online research and the library.

Findings: The study's findings revealed statistically significant differences between the mean scores of the direction of measurement of the study sample's opinions, as well as the existence of a correlation between the mean scores of each of the axes in the proposed study's mindset scale. These outcomes prove that the fashion renewal of durable gowns is one of the ways to verify garment sustainability.

Unique Contribution to Theory, Practice and Policy:

The concept of the circular fashion theory is derived from the broader concept of the circular economy, which aims to reduce waste and extend the lifespan of fashion products. The theory promotes sustainable practices such as up- cycling, refurbishing, and remanufacturing to create new value from existing garments. In other words, it encourages the reuse of materials and products to minimize waste and reduce environmental impact. In addition by applying circular fashion theory, designers can upgrade selected evening gowns by repurposing existing materials, incorporating sustainable textiles, or redesigning elements of the gowns to make them versatile and timeless. This theory encourages a shift from the linear "take-make-dispose" model to a more sustainable and circular approach. By adopting circular fashion practices, we can help create a more sustainable future for the fashion industry. Sustainability could potentially act as an argument for future studies in the fashion and design businesses. The study is expected to benefit policymakers and stakeholders in the fashion business in the Kingdom of Saudi Arabia. The study findings will be used to improve and develop the performance of fashion design sustainability. The study recommends that the adoption of effective fashion design for durable evening gowns will help achieve fashion sustainability.

Keywords: Fashion - Sustainability - Evening Gown - Outfit

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INTRODUCTION

The apparel industry is one of the most polluting in the world, so sustainability in fashion is more important than ever. The fashion industry that has existed throughout history is linked to human existence and tells about cultures and civilizations, as it is a mirror of human life. Hence, there is no doubt that the fashion business has a significant environmental impact as long as we create and consume clothes, (Kenneth 2022).

With the vast increase in consumer needs and the change in his purchasing style, clothes are produced in huge numbers, and so-called fast fashion appears to keep pace with these needs. However, this production had significant negative impacts on the environment, economy, and society in one or more ways, (Clark 2008).

These fast- changeable clothes can be dispensed easily after purchasing them once or twice to buy something newer, (Macchiona, 2015). With the increase in these wrong practices, the countertrend, which is sustainability, has emerged. Sustainability in fashion means designing garments and accessories in such a manner that their negative influence on the environment and society is minimized, (Luana, 2022: 6). The garment industry is responsible for 10% of global greenhouse gas emissions and uses about 93 billion cubic meters of water, (Stelios, 2023). Hence, employing environmentally friendly products, via renewed models is good enough to verify the circular economy concept (Donald, 2015), which is often seen as a more sustainable alternative to the traditional linear economy, in which resources are extracted, used, and then discarded. The circular economy reduces waste and keeps resources in use for as long as is acceptable, (Yasileios, 2017). This decreases the environmental impact of the fashion industry and contributes to the development of a more sustainable system.

There are a number of ways that the circular economy can be applied to fashion. For example, brands can design clothes that are made to last, using high-quality materials that can be easily repaired or recycled, (Annabel, 2022). They can also encourage clients to rent or borrow clothing rather than purchasing it completely, (Chunmin, 2018). Accordingly, we updated old models of evening gowns from the year 2022 season to be outfit for 2023 season. This has been done on the same dress textile that underwent mannequin procedure. This approach established repair and modification services to make clothing endure longer. Accordingly depending on a number of criteria. The gowns that had good durability, encouraging us to renew their models with the aid of the draping form to appear as new fashion to achieve sustainability. In this way, we may design new fashion with different models utilizing the same old nice garment textile.

Statement of the Problem

According to the concept of circular fashion theory, which aims to reduce waste and extend the lifespan of fashion products while promoting sustainable practices, we can upgrade the design for selected evening gowns by repurposing existing materials. However, the statement of the research problem will be assigned in the next questions.

1. What is the impact of fast fashion on sustainability in the field of fashion design?
2. What are the principles of sustainability in the field of fashion design?
3. What is the possibility of introducing sustainable methods in the fashion industry?

Objective of the Study

In this research, we try to shed light on the negative effects of fast fashion on the environment and society. In this respect, we present a practical proposal for fashion sustainability that can be accepted by clothing factories and consumers.

Significance of the Study

Introducing a new strategy to lessen fast fashion and its negative impact on the environment and individuals.

METHODOLOGY

The study adopted a desktop methodology that refers to secondary data collected without field work. Desk research is basically involved in collecting data from existing resource; hence, it is often considered a low - cost technique compared to field work. The study relied on already-published studies, reports, and statistics. This secondary data was easily accessed through online research and the library. However, the research follows the analytical approach to clarify the effect of fast fashion on sustainability, and follows the applied approach by presenting a practical proposal by modifying the old evening dress fashion to a new design.

Research Limits

This study is limited to the development and updating of twelve models of women's clothing for the evening and soiree. This was for women in the age group of 20 to 30 years . The other limit is connected to measuring the attitude of decision makers in clothing factories and consumers in the Al-Baha region in the Kingdom of Saudi Arabia

RESULTS AND DISCUSSION

Using the draping methods, we updated twelve models of the evening gowns, Figure (1-3). These models were designed for the 2022 season, where their textile quality was very good after many uses and steam washing. We did not dismantle the sutures; we only dismantled them at the position of change. Ten points of quality checking were applied to ensure the importance of updating certain pieces. these points are, general appearance, color suitability, dyeing quality, sewing durability, the possibility of modification, textile durability, suitability of the design to the season, less dismantling area, consumer satisfaction, ability of same owner to use.



Figure 1: Models 1, 2, 3, and 4 before and after Upgrading

Model (1), was updated by adjusting the position of the right half of the corsage from the shoulder to the centre of the dress and adding an embroidered appliqué. while, model (2) was modified via the sleeves by pleating them and positioning them on the shoulders, and affixing

a circle appliqué to the centre of the dress. In model number (3), we removed the shoulder piece, replaced the chest clasp with pearl beads, and stitched a white circle appliqué to the centre of the garment. On the other hand, we removed the right sleeve and attached a diagonal appliqué from the left underarm to the waist. in model (4).



Figure 2: Models 5, 6, 7 and 8 before and after Upgrading

In model (5), we added the black tulle suitable for the grey satin dress diagonally from the right shoulder over sleeve dropdown to the tail. While, in model (6) we hybridized the red chiffon fabrics with the dress with embroidery added to the chest v-shape.

In model (7), the right upper portion was diagonally removed, added circular appliqué on the waist, and decorated the dress end with a noted black bow in the rear centre of the tail. Continuing our effort of producing new fashions for achieving sustainability, model (8) underwent removal of the upper portion of the dress and replaced it with a different design, sleeveless, made of a different fabric that matched the original dress color, making it more elegant and appropriate for the evening. However, in model (9), we added a tiny shoulder sleeve made of satin in a complementary shade to the dress, the dress length was reduced, and a well-fitting lining from the rear side fitted to be longer than the dress.



Figure 3: Models 9, 10, 11, and 12 before and after Upgrading

In model (10) we altered the sleeves in this model, both in design and color, to match the dress's fashion and coloring. However, in model (11), which is amazingly similar to the gown (8); we did the same adjustment with a new fabric type, black in color with sparkling beads, to make it more current.

Eventually, the left half sleeve was replaced by the recognized huge yellow appliqué, which disintegrated in shape from the front, while the back is plain, utilizing draping methods. We choose satin fabrics that are appropriate for the outfit. On the other hand, the rear back area of the dress was given a striking design by decollating it with the huge dropdown cloth of the same color and kind as the bow that produced the model (12).

4- Statistical Studies

An analysis of the used statistical coefficients was made based on the reality of the study sample, in order to verify its hypotheses, which helps in interpreting and discussing the results. The trend scale has been applied, with its axes to be answered by manufacturers of ready-made garments and consumers. The percentages of responses to the items on each axis were calculated separately to find out the attitudes of manufacturers and consumers towards the concept of the study. The special arrangement of the percentages towards applying the idea of the study is shown in Table 1.

Table 1. The Relative Weight of the Elements on the Scale of the Study Sample

	Elements	Relative weight percent
1	The possibility of updating the fashion of clothing with the same old material.	88%
2	The possibility of applying the proposed study to ready-made garment factories	65%
3	The impact of fast fashion on sustainability in the field of fashion design	76%
4	The possibility of production based on the concept of sustainability	63%
5	Using draping technology on the mannequin to achieve sustainability	85%

The axe number one, connected to the possibility of updating the fashion of clothing with the same old material, recorded the highest value, while the concept of production based on sustainability recorded the least value. There are statistically significant differences between the mean scores of the trend scale for converting old fashion into sustainable Table 2, however, $\sigma = 17.114$ is Statistically significant at the 0.01 level of significance.

Table 2: The Significance of Statistical Differences between the Measurement and the Trend Scale

Var(x)	$\Sigma(xi-\bar{x})^2$	D.f	Mean $\Sigma(xi-\bar{x})^2$	σ	Significance level (α)
Among groups	50.061	5.0	7.512	17.114	0.01
Inside groups	65.140	133.0	0.468		
Total	115.201	138.0			

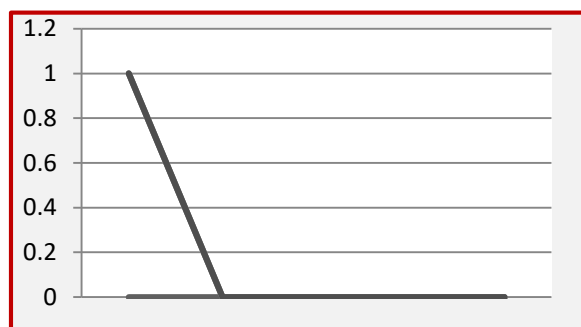
This means that there is a difference between the opinions of ready-made garment manufacturers and consumers about the possibility of applying the proposal for the transformation of fast fashion companies towards sustainability.

Due to the different capabilities, production capacity, and the nature of the clothing groups that they produce, the cost of producing sustainable clothing is more than the cost of producing changing fashion clothing. It is clear from Table 3 that there is a statistically significant

correlation at the level of meaning of 0.05 between first axes and the fourth one. Also there is a strong correlation at 0.01 level among most of the measurements axis.

Table 3: Correlation between Measurement Axes

Axes	The possibility of updating the fashion of clothing with the same old material.	The possibility of updating the fashion of clothing with the same old material.	The possibility of updating the fashion of clothing with the same old material.	The possibility of updating the fashion of clothing with the same old material.	The possibility of updating the fashion of clothing with the same old material.
The possibility of updating the fashion of clothing with the same old material.	1				
The possibility of applying the proposed study to ready-made garment factories	1.000 **	1			
The impact of fast fashion on sustainability in the field of fashion design	0.827 **	0.827 **	1		
The possibility of production based on the concept of sustainability	0.805 **	0.805 **	0.836 **	1	
Using draping technology on the mannequin to achieve sustainability	0.755 **	0.755 **	0.877 **	0.821 **	1



Practical and Analytical Methods

Gowns under investigation were collected from students of the last year in the department of home economy, fashion design path in the college of science and art at Al-Baha University , Balgurshi branch. All pieces were selected according to a ten points check of quality, including general appearance of the dress, quality of mantling, textile durability and applicability of small changes without dismantling using the draping method. However, In this research, we use some statistical tools like Attitude Scale Arbitration, a trend scale designed for textile factory domain specialists and decision makers, and free expert and consumer interviews.

CONCLUSION

There is no single answer to the question, "What is fashion sustainability?" However, there are a few crucial points to consider while considering this issue.

To get started, sustainability in fashion means designing long-lasting garments and accessories. This includes employing high-quality materials and building processes to ensure that your things can survive continuous wear and tear. Furthermore, sustainable fashion frequently involves selecting products that are adaptable and can be worn in a variety of ways. This allows you to get more usage out of each item, which helps to lessen the total environmental effect. Keeping these things in mind, you can help to make the fashion industry more sustainable and responsible for a more eco-friendly future.

Conflict of Interest

The authors declared no conflict of interest

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