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Production of Fashion Items with Fabrics Scrap and Carton Waste for Sustainable Living of Internally Displaced Persons (IDPs) In Benue State

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Abstract

The study was to produce fashion items with fabric scrap and cartons of waste in Benue state, Specifically, the study used three objectives and three research questions to guide the study and to determine the fashion items that could be produced from fabric scrap and carton waste for sustainable living and to also determine the acceptability of the fashion items produced from fabric scrap and carton waste. Five prototype fashion items were produced from fabric scrap and carton waste and the acceptability test was carried out. The area of the study was Benue state IDP camps, the study adopted a Research and Development (R&D) design. The population for the study was 1,597, IDPs Benue State Emergency Management Agency (BENSENA) Clothing and Textile lecturers in both Federal and State Universities in Benue state and Dressmakers. The sample size for the study was 120. A structured questionnaire and a 9-point hedonic scale evaluation test were the instruments used for data collection. The instruments were validated by three experts from the Department of Vocational and Technical Education at Benue State University. Cronbach Alpha reliability method was used to test the reliability of the instruments, and the result yielded a reliability coefficient of 0.83 and 0.72 respectively. The results from the research question and the 9-point hedonic scale were both analyzed using mean and standard deviation. The major findings from the study identify; 11 fashion items that can be produced from fabric scrap and carton waste, Patchwork Clothing, Fabric Scrap Jewelry, Cardboard Box, Handbags, Fabric Scrap Headband, Cardboard Shoes, carrier bags, handbags, purses, bible carriers, and Bango. Acceptability level based on aesthetic and functional attributes of fashion items produced from the fabric scrap together with carton waste means include. (8.34) skirt, (7.84) for handbags, fabric scrap headbands {7.95), fabric scrap shoe (7.64) and grown, (8.16). In conclusion, fabric scraps and carton waste are established to be recycled at affordable but fashionable cost, thereby preventing waste as well as sustaining the livelihood of IDPs in Benue to some great extent, it was recommended that the IDPs should utilize fabric scraps and cartons which are considered waste to produce fashion items as this will improve their fashion life.

Key Words: Fashion items, Fabric scrap, Carton waste. Sustainable Living, internally displaced people.

Introduction

In today's world, displaced individuals have garnered immense attention due to its far-reaching effects. According to Dadras, O. (2024), the number of displaced persons worldwide stands at approximately 71.1 million, with a significant number located in Africa and Asia. In Nigeria, displacement arises from communal violence, internal armed conflicts, leadership disagreements, and natural calamities such as floods.

Internally Displaced Persons (IDPs) are defined as individuals or groups who are forced to flee their homes or habitual places of residence due to armed conflict, violence, human rights violations, or natural or human-made disasters (Gakil et al, 2022) These individuals are citizens of their country and have not crossed any internationally recognized state boundaries. IDPs can be displaced within their country due to natural disasters like erosion, desertification, and flooding. Human-caused disasters like civil war, internal armed conflict, or terrorism can also displace people. In these situations, people often have no choice but to abandon their homes and leave behind their possessions, families, and communities, which can have devastating consequences for their physical and mental well-being.

The conflict between farmers and herdsmen mostly causes the humanitarian crisis in Benue State. The areas most affected are Guma, Logo, Katsina-Ala, Agatu, Buruku, Kwande, and Makurdi Local Government Areas in Benue State, (State Emergency Management Agency (SEMA,2022) report. An Inter-Agency Rapid Assessment Mission conducted in 2018 found that over Two hundred and twenty-five thousand people were displaced in Guma, Logo, and Makurdi due to persistent attacks and counterattacks. Most of the internally displaced persons are victims of attacks by herdsmen, which have forced them to seek refuge in camps and host communities in Benue State. Currently, seven registered camps in Benue State are hosting many Internally Displaced Persons (IDPs), according to BEMSEMA (2022) Displacement from one's home due to the crisis has led to the loss of property, fashion items, and other objects that are valued for their well-being and cultural significance, livelihoods, and disruption to business activities, Many people living in IDP camps have lost their fashion items during their displacement from home and are now lacking these essential items. Fashion items not only help them look good but can also generate income for sustainable living. Unfortunately, these items are not easily accessible due to the high cost of things on the market, including fashion items. In addition, many IDPs have lost their sources of income due to conflicts or natural disasters, which further limits their ability to own these items. To address this problem, people living in IDP camps may have to look inward and use fabric scraps and carton waste available in waste bins to improvise as materials for making fashion items. This approach offers a sustainable solution to the problem of access to fashion items for those living in IDP camps.

Fashion refers to the prevailing style or trend in clothing, accessories, footwear, makeup, hairstyle, and overall appearance at a particular time and place (Almond, 2017). It is not just about what people wear, but also about how they choose to present themselves and express their individuality through their clothing and personal style. Fashion is influenced by various factors including culture, society, historical events, technological advancements, economic conditions, and individual preferences (Ugwu et al,2018). It is also often shaped by the creative vision of designers, fashion houses, influencers, and celebrities who set trends and inspire others to follow suit. Fashion is highly subjective and dynamic, constantly evolving. What may be considered fashionable today could become outdated tomorrow, as trends come and go in cycles. However, certain timeless styles and classics also endure throughout the years. In addition to its aesthetic aspect, fashion can also carry social, cultural, and even political meanings. It has the power to reflect societal values, challenge norms, and communicate identity and belonging within various communities.

Fashion serves as a means of self-expression and creativity, influencing how individuals present themselves and are perceived by others. Utilizing unconventional materials like fabric scraps and carton waste, individuals can craft a variety of fashion items ranging from blouses, shirts, handbags, belts, hats, sunglasses, gloves, jewelry, yoga pants,

sports bras, dress shirts, pencil skirts, dress shoes, ties, caps, formal wear, and headbands. According to Mizrachi and Tal (2022), by repurposing materials that are typically discarded, individuals can create unique and sustainable fashion pieces that showcase their creativity and contribute to reducing waste in the fashion industry. This innovative approach to fashion design highlights the potential for environmentally conscious practices within personal style and self-presentation. When fabric-related activities take place, leftover pieces are generated that may not be needed by the dressmakers. These surplus pieces are referred to as fabric scraps

Fabric scraps according to Ayalakshmi, (2024).), are the remnants left over from sewing projects that vary in size, shape, and material, often too small for use. Fabric scrap is the pieces of fabric that are cut out and discarded by dressmakers during the construction of clothes. They include pre-consumer waste, post-consumer waste, and production waste." These scraps originate from various activities like clothing production, quilting, or crafting. While some discard these scraps, others repurpose them for creative projects such as fashion items from patchwork, quilts, fabric collages, toys, accessories, or cleaning clothes, promoting sustainability in crafting (Ayalakshmi, (2024).). During unpackaging of goods, carton waste is generated.

Carton waste according to Schneider *et al.* (2022), is a material or item that is abandoned and not put to any use. Recycling carton waste not only aids in conserving natural resources but also contributes to reducing energy consumption and minimizing environmental impacts associated with the production of new paper or cardboard products. Proper disposal or recycling of carton waste is crucial for waste reduction efforts and promoting sustainability. This study is concerned with waste material generated by dressmakers, which consists of small pieces of fabric left over from the main fabric after cutting, as well as old fabrics and cartons that are no longer useful. This waste often ends up piled up or littered around the area. Sometimes, the fabric waste is burnt due to the difficulties involved in proper disposal, which causes environmental pollution and health hazards. Burning these wastes leads to soil degradation and environmental pollution in the form of smoke, which is hazardous to health (Ashauqi & Mohd, 2022)

The fashion industry is expensive, and as a result, many people, especially IDP people, cannot afford it. Utilizing fabric and carton waste for fashion items can help Internally Displaced Persons (IDPs) improve their appearance and psychological well-being, while also preventing health hazards and reducing environmental pollution caused by burning and incineration. This approach can lead to sustainable living (Lubowiecki-Vikuk *et al*, 2021). This fabric waste can be used to construct useful fashion items, such as handbags and headbands, which can be used to decorate and protect the body. Fashion items can be produced by using fabrics and carton waste gathered from sewing or provision shops while considering the aesthetic attributes of the fashion items. Shwetank and Rashimi (2020) define aesthetic attributes as quality elements such as color, texture, shape, and line that add value to a product. The aesthetic appearance and features of a product are critical to its success. The production process can be achieved by joining pieces of fabric waste together using patchwork, sewing techniques, research and development, and sustainable living practices to obtain the required length and width of the materials.

Sustainable living fundamentally revolves around making informed choices that aim to mitigate our individual and collective environmental impact. This concept encompasses a variety of practices and lifestyle adjustments that contribute to offsetting climate change and reducing environmental degradation (Akin et al) In this regard, IDPs in Benue State camps can use fabric scraps and carton waste to produce fashion items, which will have a positive impact on their appearance and living standards. This can also reduce the

blockage of drainage with liters of fabric scraps and waste cartons, as well as the burning that pollutes the air. This will help to improve the effect of climate change as well. To achieve this, the process of research and development is required. The IDPs in Benue State used to farm and engage in other economic activities to earn a living, but their means of livelihood were disrupted due to incessant attacks from herdsmen. A lack of resources and skills has led to a high rate of unemployment and dependence among IDPs. To address this issue, the study proposes improvisation of fabric scraps and carton waste, to create fashion items. This will create self-employment opportunities, reduce poverty, and contribute to economic growth. The objective of this study is to focus on creating and designing sustainable fashion items using fabric scraps and carton waste and assign their acceptability by IDPs.

Objectives of the study

The main objective of this study is to create and produce fashion items using fabric scraps and cartons waste for Internally Displaced Persons (IDPs) in Benue State. The specific objectives of the study are:

1. produce five prototype items using fabric scraps and cartons.
2. evaluate the acceptability of the items based on the functional and aesthetic attributes of the items produced.

METHODOLOGY

Design of the Study

The study utilized a research and development (R&D) design, which involves creating new products, programs, or procedures. This is followed by the process of field-test, evaluation in order to refine the products, programs and procedures until the acceptable criteria of effectiveness, quality or similar standards are met. In this study, the R&D design was used to develop fashion items using fabric scraps and carton waste and was tested for acceptability.

Area of the Study

The research was conducted in Benue State, which is in the north-central region of Nigeria and currently hosts many IDP camps in the area. The reason for conducting the study in this region was to improve the living conditions of many Nigerians who are taking refuge in the camps and the availability of the raw materials for this study in Benue State, which should be the social scope.

Population for the Study

The population for the study was 1, 597,000 DP. (Benue State Emergency Management Agency (BENSEMA), 2022)

Sample and Sampling Technique: The study had a sample size of 344 respondents which was determined using the Taro Yamane formula in Uzoagulu (2011)

Instrument for Data Collection: A 9-point hedonic scale. was used to determine the acceptability of the fashion items produced from fabric scrap. A 9-point hedonic scale evaluation test Instrument sought to assess the acceptability level based on aesthetic and functional attributes. The hedonic rating scale of 9 = like extremely, 8 = like very much, 7 = like moderately,6 = like slightly, 5 = neither like no dislike, 4 = Dislike slightly, 3 = dislike moderately, 2 = dislike very much, 1 = dislike extremely were the response options. The 9-point hedonic scale instruments were validated by three experts in clothing and textile lecturers, from the Department of Vocational and Technical Education at Benue State University.

Material and Methods for Constructing Fashion Items

The materials needed to produce fashion items include fabric scrap, carton wastes, measuring tape, scissors, Pencil, paper, ruler, and eraser. Fabric scrap and carton waste were gathered, measured, designed, and cut out into different shapes and sizes; they were sewn together using machine stitches. Five fashion items were developed. These include handbags, headbands, skirts, gowns, and shoes as seen in the flow chart below.

Flow Chart for Producing Fashion Items

Collections of Fabrics scrap and carton waste

↓

Sorting the Fabric s[illegible]p and carton waste

↓

Cutting Fabrics scrap and c[illegible]ton Waste with Templates

↓

Joining the pieces of [illegible]rics to form a design

↓

Stitching together the design shape to fashion items

The flow chart Procedures explained how five fashion prototypes were produced from fabric scraps and carton waste. These fashion items were displayed for the IDPs to indicate the level of their acceptability the IDPs assessed, based on aesthetics attributes, using the 9-point hedonic scale evaluation test instrument.

The pictures of the Fashion Items Produced from fabric scrap and Carton waste.



Skirt



Bag



Shoe



Gown



Headband

Method of Data Collection: The produced fashion items from fabric scrap and carton waste were displayed on the table at the Agan IDP camp. A copy of a hedonic scale was handed in the hand of the IDPs by the researcher to ascertain the acceptability of fashion items based on aesthetic value. The hedonic scale sheets were corrected back to be analyzed.

Method of Data Analysis: The mean scores awarded by the IDP were used to determine the acceptability level of the fashion items based on their aesthetic attributes. Items that had a mean value of 5 or above on the Hedonic rating scale were considered acceptable.

Results

Table 1 presents the items used to test the acceptability of fashion items made from fabric scrap and carton waste. The evaluation was based on the items' aesthetic attributes. The results revealed that all items scored a mean of 7 or above, which is above the cut-off point of 5.00, indicating that the fashion items are aesthetically pleasing and generally acceptable by all the IDPs. The table also shows that the standard deviations (SD) of the items range from 0.9 to 1.70, indicating that the mean values of the IDPs were similar in their rating.

Table 1: Mean and Standard Deviation ratings of Fashion item acceptability rating

S/N	Item Statement	$\overline{X}$	S D	Remark
1	Colour for skirt	7.89	1.197	A
2	Colour for handbag	7.70	1.418	A
3	Colour for headband	7.90	1.210	A
4	Colour for gown	7.80	1.508	A
5	Color for **Shoes**	7.90	1.294	A
6	General acceptability for the skirt	7.84	1.167	A
7	General acceptability for handbag	7.95	.911	A
8	General acceptability headband	7.84	1.834	A
9	General acceptability for shoe	8.16	.834	A

Discussion

The current study produced selected fashion items from fabric scraps and carton waste which were wasted by dressmakers. This agrees with Gupta, *et al.* (2019). who posited that fabric scraps found in dressmaker shops have the potential to be used to produce useful materials. Fabric pieces of various colors and types were gathered from dressmakers' shops and were designed and cut into different shapes by using a template to shape them. The fabric pieces were sewn, together to produce the items.

The acceptability test on the aesthetic attributes of the produced fashion items shows that the acceptable means were very high. This result aligns with Offiong *et al* (2022) who developed household items from fabric waste including bed linen, throw pillows, and curtains among others five household clothing items were produced from fabric waste from dressmakers in Cross River State and the acceptability was high. This is also in line with the assumptions of Pongracz (2002), who stated the waste management theory that provides an understanding that nothing is complexly a waste, and that the essence of human beings

is to create something new.

Conclusion and Recommendations

The production of fashion items from fabric scraps and carton waste, with such an esthetic value, will not in a small measure help in the sustainability of IDPs without necessarily buying expensive fabrics for such use. The use of fabric waste to produce fashion indicates that nothing is completely wasted, in any waste, there must be what one can make use of, and that could be of benefit to the individual or society. Thus, this work supports the adage 'waste not, lack not. Based on the findings and conclusions drawn from the study, the following recommendations were made:

1. Dressmakers including tailors/ seamstresses should utilize fabric pieces that are considered waste into clothing items instead of burning them, throwing a large quantity of them into landfills, or even littering them to cause health hazards and drainage blockage. And should select and preserve waste of off-cut for sale to those who might need them
2. Indigent people, including IDPs, should collect fabric waste from the shop for the shop to produce fashionable items as such items are very acceptable.

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