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RESEARCH ARTICLE

PRODUCTION AND MARKETING OF KEY HOLDERS USING WASTE UPHOLSTERED TEXTILE FABRICS

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ABSTRACT

Upholstery textiles are fabrics used for covering furniture to give a soft and inviting feel for perfect relaxation. These fabrics become wasted during cutting and sewing involves fabric remnants, irregular pieces and trimmings. Fabric wastes become heaps in landfills and deplete the ozone layer when disposed of through incineration. The concept of waste to wealth emphasises transforming of discarded materials such as upholstery fabric into valuable products like key holders. This approach not only reduces wastes but also promotes sustainability and economic growth. By utilizing textile waste, manufacturers can create unique, eco-friendly household articles, contributing to a circular economy. This process fosters local job creation, empowers communities and minimizes environmental impact through recycling and repurposing. The initiative practices can convert waste into resources, enhancing both economic and environmental outcomes in the production industry. This paper looks into types of upholstery textile fabric and its types, textile upholstery scraps in the production of valuable and relevant household articles for the sustainability of the community, thereby reducing land contamination, safety and well-being of the citizens. The paper was summarized, concluded and recommendations proffered.

Keywords: Textile upholstery, waste, wealth, waste management, keyholders.

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1.0. INTRODUCTION

The textile industry is one of the most polluting industries in the world, generating about 10% of global greenhouse gas (GHG) emissions and 20% wastewater. Nearly 5% of the wastes in landfills are textile waste and approximately 35% of all oceanic primary micro plastic pollution is caused by the industry operations. All these pollution statistics can be noted as a casual effect of the fashion movement and unsustainable business models (Udeani, 2017).

Fabric waste exists due to pressure to produce without consideration for how utilized materials can be creatively channeled into producing another item, resulting in a large volume of waste. Furthermore, the majority of fabrics and materials are woven from plastic threads such as acrylic, nylon, polyester, fleece and rayon (non-biodegradable). They do not naturally dissolve or disintegrate through natural agents and remain on earth for years without natural degradation, therefore, the threat caused by them is critical as they are the leading cause of air, water and soil pollution with a high chance of terminal diseases.

Increased production levels will lead to increased wastewater and pollution due to harsh chemicals from dye. This wastewater could potentially go back into water bodies untreated, contaminating the habitat of aquatic plants and animals. This continuous activity has led to the release of micro plastics into the oceans, which poses a threat to wildlife and humans. In a bid to reduce these negative impacts on the environment, we should now focus on making household furnishings to stay trendy.

Waste management is a global discuss due to its devastating effects on the environment. Human and industrial waste are always diverted to landfill which on the other hand has deteriorated the ecosystem. Waste, which is categorized under solid, liquid and gas, is drawn from all angles of industrialization and thus industries can be termed as the mother of waste. Reports have shown that textile and clothing manufacturing industries are ranked to be one of the most polluting industries in the world (Udeani 2017).

In recent times, waste management has become a major environmental issue due to the increased environmental costs on society for its collection, treatment and disposal. Fabric wastes become heaps in landfills and deplete the ozone layer when disposed of through

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incineration. The pollution comes in not only during textile processing and production but also during the consumption of textiles. The fact that the production of textile goods highly influences textile waste generation, means that more waste will continually be generated as more of the goods find their way to society every day. The textile wastes come in clothing textiles and upholstery textiles. Upholstery textiles are fabric applications to cover sofas, lounges, armchairs, dining chairs, ottomans and other types of seating. These fabrics are categorized as commercial or residential. They need to meet a certain rub rating to be used in commercial settings. Upholstery materials can be made of natural fibers, synthetics or a mixed blend. Vinyl and leather have been excluded, as though they are upholstery textiles, but they are technically not fabrics (Soehardi 2024).

Wojciechowska and Kowaluk (2024) described upholstery fabrics as the materials that include fabric, webbing, and springs that make up the soft coverings of chairs, sofas and other furniture, and that the main types of fabric used in upholstery are linen, hemp, cotton, viscose, polyester and wool.

Recycling upholstery textiles is challenging due to the complexity of materials which often include a mix of fabrics, foams and adhesives that are difficult to separate. The intricate designs and layers in upholstered furniture make it labour-intensive and costly to dismantle for recycling (Soehardi, 2024). In combating this problem, textile industry has taken some measures in the form of reuse, reduce and recycle.

There are an increasing number of brands working hard to fight textile waste in order to keep them out of landfills by providing better ways for consumers to dispose of them. People are also encouraged to drop textile waste in some designated areas; other ways to reduce textile waste are to recycle, swap or exchange, rent out and make donations (Road Runner 2021). There are so many things one can make out of these upholstery scraps no matter how big or small the pieces are. Some of the household projects are lampshades, coasters, tote bags, table or mantle runners, wall décor, jewellery holders and key holders Wojciechowska and Kowaluk (2024). This research traces how upholstery textile waste/scrap is managed to recycle and upcycle in the production of household articles: key holder.

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2.0. LITERATURE REVIEW

The textile industry is generally referred to as one of the most environmentally harmful sectors, with substantial contributions to pollution, greenhouse gas emissions, and resource depletion. Globally, it accounts for approximately 10% of total greenhouse gas emissions, a staggering figure that underscores the sector's significant role in climate change (World Bank, 2019). Additionally, the textile industry is responsible for an estimated 20% of all industrial water pollution worldwide, largely due to the extensive use of chemicals in dyeing and finishing processes. These processes result in the discharge of toxic pollutants into water systems that affect aquatic ecosystems and pose health risks to nearby communities.

Beyond water pollution, the textile sector also contributes heavily to oceanic plastic pollution, with synthetic fibres like polyester, acrylic, and nylon constituting roughly 35% of microplastic waste in oceans (Boucher & Friot, 2017). This pollution is pervasive because it affects marine biodiversity and it is gradually entering the human food chain, where microplastics have been detected in seafood and even table salt, raising public health concerns (Geyer, Jambeck, & Law, 2017).

Upholstery, used widely in furniture and automobile manufacturing, is a notable and rising concern within the textiles sector. Upholstery fabrics, which include both natural and synthetic fibers, often create substantial waste due to leftover remnants, trimmings, and flawed pieces generated during production (Wojciechowska & Kowaluk, 2024). These fabrics are typically made from complex material layers, including foam, adhesives, and various textile blends, which complicate recycling efforts due to the difficulty of separating materials. Synthetic materials like polyester and nylon further exacerbate the issue because they are non-biodegradable and persist in the environment for extended periods, thereby posing long-term ecological risks (Peters, 2020). Most upholstery waste is either incinerated, releasing harmful chemicals into the atmosphere, or landfilled, where it contributes to soil degradation and potential groundwater contamination (Roadrunner Recycling, 2021). Recycling these materials is labour-intensive and costly; dismantling multi-layered upholstery fabrics requires specialized processes and machinery to ensure proper separation and material recovery (Pal, 2022). Consequently, the majority of upholstery waste

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accumulates in landfills, which not only represents a missed opportunity for material recovery but also contributes to ongoing environmental degradation.

According to Pal (2022), efforts to address these challenges have led to the development of more sustainable practices in textile waste management, with upcycling emerging as a particularly promising solution. Unlike recycling, which often involves energy-intensive processes to break down materials, upcycling retains or enhances the value of the original materials, making it a more resource-efficient option (Adekunle, 2023). In the textile industry, upcycling commonly involves repurposing fabric scraps and remnants into new products, thereby minimizing the need for virgin materials and reducing overall waste. This practice aligns with circular economy principles, which seek to keep materials in use for as long as possible through continuous repurposing (Wojciechowska & Kowaluk, 2024).

In countries like Nigeria, upcycling has become a viable method for waste management as well as economic empowerment. Local artisans utilize traditional techniques, such as patchwork and embroidery, to transform textile waste into valuable products, thus supporting local craftsmanship and reducing landfill waste (Adekunle, 2023). Initiatives like MitiMeth, a Nigerian social enterprise, have successfully combined environmental and economic objectives by transforming invasive plants like water hyacinths and textile scraps into artisanal products, such as bags and baskets. This approach not only generates income for local communities but also addresses ecological issues, demonstrating how waste can be turned into a resource through sustainable innovation (MitiMeth, 2021).

Furthermore, government and community-led programs such as the Waste2Wealth Initiative in Lagos exemplify the integration of waste management and economic development goals. By collaborating with artisans to convert textile waste from markets into new products, this initiative has reduced the amount of waste directed to landfills and provided valuable employment opportunities, particularly for marginalized populations. Through training programs, Waste2Wealth empowers artisans with the skills needed to produce marketable goods from discarded textiles, fostering local entrepreneurship and reducing environmental harm (Lagos Waste Management Authority, 2022). In a similar vein, Africa Collect Textiles (ACT) in Kenya and Nigeria operates as a collection and upcycling hub, working with local

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designers to transform used clothing and textile scraps into desirable products. By targeting environmentally conscious consumers, ACT has created a sustainable business model that promotes recycling and upcycling while generating economic value (ACT, 2023).

In addition to these initiatives, upcycling Ankara fabric scraps which is a popular textile in Nigerian fashion has become a means of preserving cultural heritage while addressing environmental issues. Small businesses and fashion designers collect Ankara remnants to create accessories such as earrings, headbands, and purses. These products appeal to both local and international markets, especially among consumers who prioritize eco-friendly and culturally significant products. Through these efforts, Nigerian artisans not only reduce textile waste but also add value to discarded materials within a cultural framework, showcasing the dual economic and ecological benefits of upcycling (Adekunle, 2023).

Despite these promising developments, the textile industry's shift towards a circular economy faces several barriers. Recycling mixed-material upholstery waste remains costly and technologically challenging, especially due to the complex layering of fabrics, foams, and adhesives that make separation labor-intensive (Soehardi, 2024). Furthermore, the industry lacks adequate infrastructure and policy support to implement large-scale recycling initiatives. Current waste management strategies, which primarily involve landfilling and incineration, continue to dominate, particularly in regions with limited access to recycling facilities (World Bank, 2019). Although the “Reduce, Reuse, Recycle” framework offers a foundation for sustainable waste management, it has proven insufficient in addressing the scale and complexity of textile waste, particularly for items like upholstery that require specialized handling (Roadrunner Recycling, 2021). Innovative approaches, such as the incorporation of recyclable and biodegradable materials at the design stage, could facilitate easier recycling and waste reduction in the long term, but widespread adoption would require industry-wide commitment and supportive policies to overcome cost constraints and resistance to change (Pal, 2022).

The pressing environmental challenges the textile industry poses underscore the urgent need for innovative solutions that prioritize sustainability. By adopting circular economy models, upcycling practices, and sustainable design principles, the industry can reduce its ecological

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footprint and transition towards a more responsible approach to production and waste management. While challenges remain, the growing momentum behind initiatives like Waste2Wealth, ACT, and MitiMeth demonstrates the potential for textile waste to become a valuable resource that supports both environmental protection and economic empowerment (Soehardi, 2024).

3.0. METHODOLOGY

3.1. Materials and Method of Production

Production is any activity which serves to satisfy human needs and wants. It is the making of a product or service which is intended for sale at a money-price in a market. The product or service has to be tradable for money (Investopedia, 2016). Textile fabric keyholder is a recycled product that involves converting upholstery fabric waste into a useful product.

Materials Needed for Keyholder Production are:

- Upholstered fabric pieces
- Needle
- Thread (Twain)
- Fibre
- Button
- Ring
- Sewing machine
- Scissors

Method of Production

1. Reshape the fabric pieces into 4 by 3 inches
2. Cut a narrow strip of fabric (to hold the ring)
3. Fold the fabric into two
4. Place the narrow strip in the middle of the folded fabric and sew it together.
5. Use the needle to make running stitches through the open end of the 3-inch side. Do not cut the thread.

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6. Pull the thread to bind to bind together and form gathers.
7. Turn the fabric to the right side and fill the inside with fibres
8. Sew the open end with running stitches and pull the thread to bind the edges together without cutting the excess thread
9. Insert the needle through the top to the bottom part to make the design on the fabric with thread.
10. Pull the thread tightly and repeat the process about six (6) times until it goes round, giving six (6) puffy designs
11. Fix one button on the top and another at the bottom.
12. Fix the ring through the narrow strip sewn to the fabric,
13. Your beautiful keyholder is ready.

Photo work 1: Waste upholstered fabric

Photo work 2: Fibre

Photo work 3: Keyholders produced

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4.0. RESULTS

4.1. Marketing of the keyholder

Marketing is the activity, set of institutions and processes for creating, communicating and exchanging that have value for customers, clients, partners and society at large (American Marketing Association, 2016). It is used to create, keep and satisfy customers, with customers as the focus of its activities. There are five marketing concepts that are used to identify and fulfil the needs of its customers, benefiting both the customers and the industry; they are production, product, selling, marketing and societal concepts (Oxidianich, 2019). After production of the keyholder, the product will be sold to various categories of consumers such as students, workers, businessmen/women, car owners, house owners and the society at large since everyone uses keys in one way or the other. This implies that there is a market for the product.

4.2. SUMMARY

The study investigated the environmental and economic challenges posed by upholstery textile waste and explored its transformation into useful products, specifically key holders. Upholstery fabrics, composed of complex and non-biodegradable materials, contribute significantly to global waste when incinerated or disposed of in landfills, resulting in pollution and resource depletion. The study focused on the "waste-to-wealth" concept, in which waste textiles are repurposed into valuable items, reducing environmental impact while generating economic opportunities. Techniques for crafting key holders from textile scraps were examined, showing how upcycling can appeal to environmentally conscious consumers and promote economic empowerment by creating jobs for artisans. The study underscored that upcycling practices support a circular economy by reducing waste and fostering sustainable consumption patterns, highlighting the potential of such initiatives to be scaled across the textile industry.

5.0. CONCLUSION AND RECOMMENDATIONS

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5.1. Conclusion

The study concluded that upholstery textile waste is a significant environmental issue, with large quantities accumulating in landfills or being incinerated, thus exacerbating pollution. The complexity and non-biodegradability of these fabrics limit recycling options, contributing to long-term ecological harm. Upcycling upholstery waste into products like key holders was identified as a viable, sustainable waste-management strategy that reduces environmental impact and creates economic value. By converting waste into sellable products, upcycling mitigates landfill accumulation and supports local economies by offering new income streams for artisans. The study recognized existing barriers to upcycling, including the complexity and cost of recycling mixed materials, but emphasized the potential of "waste-to-wealth" approaches to align with circular economy principles. For these initiatives to succeed on a larger scale, industry cooperation, government support, and consumer engagement were deemed essential.

5.2. Recommendations

Based on the findings of this study, the following recommendations were made.

- The government at the federal and state levels should provide financial incentives (e.g., subsidies, tax reductions) for companies engaged in sustainable waste management and enforce regulations promoting the use of recyclable, biodegradable materials in textile production.
- Textile manufacturers should invest in advanced recycling technology and collaborate with local artisans to upcycle textile waste into marketable products, creating sustainable goods and reducing landfill use.
- Environmental organizations and NGOs should increase consumer awareness of the benefits of upcycling and sustainable disposal, fostering demand for eco-friendly products and responsible textile waste management.
- Consumers should support environmentally sustainable practices by purchasing upcycled products, such as key holders made from textile waste, and by seeking brands that prioritize sustainable production.

Competing Interest

The authors have declared that no conflicting interest exist in this study.

REFERENCES

Adekunle, O. (2023). Sustainable fashion and upcycling in Nigeria: Opportunities and challenges. *Journal of African Sustainable Development, 8*(1), 65-78.

Africa Collect Textiles (ACT). (2023). Our mission and impact. Africa Collect Textiles. Retrieved from https://www.africacollecttextiles.org

American Marketing Association (2016), https://www,encyclopedia.com> Retrieved 8th September, 2005.

Bamigboye, O., Olujimi, B., & Okeowo, S. (2021). The role of waste-to-wealth initiatives in Nigeria's circular economy. *African Journal of Environmental Management, 15*(3), 221 – 234.

Boucher, J., & Friot, D. (2017). Primary microplastics in the oceans: A global evaluation of sources. *International Union for Conservation of Nature.* Retrieved from https://portals.iucn.org/library/sites/library/files/documents/2017-002-En.pdf

Geyer, R., Jambeck, J. R., & Law, K. L. (2017). Production, use, and fate of all plastics ever made. *Science Advances, 3*(7), e1700782. https://doi.org/10.1126/sciadv.1700782

Investopedia (2016), Tertiary history: Tertiary sector of the economy, https://www.investopedia.com> Retrieved 26th March, 2019.

Lagos Waste Management Authority. (2022). Turning waste to wealth: Lagos Waste 2 Wealth Initiative. Lagos State Government. https://www.lagoswaste.gov.ng/waste2wealth

MitiMeth. (2021). Empowering communities through sustainable craft innovation. Retrieved from https://www.mitimeth.com

Pal, R. (2022). Circularity of textile waste in the fashion supply chain: Opportunities and challenges. *Journal of Cleaner Production, 363*, 132478. https://doi.org/10.1016/j.jclepro.2022.132478

Peters, M. (2020). Environmental impact of synthetic fibres in upholstery: A critical review. *Environmental Textile Journal, 14*(2), 101-112.

Roadrunner Recycling. (2021). Textile recycling: How and why to recycle textiles. Retrieved from https://www.roadrunnerwm.com/blog/how-and-why-to-recycle-textiles

Soehardi, M. (2024). Challenges of recycling mixed textile wastes in upholstery. *Journal of Sustainable Manufacturing, 19*(1), 35-49. https://doi.org/10.1016/j.jclepro.2023.134857

Udeani, I. (2017). Sustainable waste management in the textile industry: Case of upholstery textiles. *Journal of Environmental Science and Management, 10*(2), 125-134.

Wojciechowska, P., & Kowaluk, M. (2024). The environmental impact of upholstery textile waste and its upcycling potential. *Journal of Textile Science, 15*(4), 77-92. https://doi.org/10.1016/j.jclepro.2022.132478

World Bank. (2019). How much do our wardrobes cost to the environment? World Bank Group. Retrieved from https://www.worldbank.org/en/news/feature/2019/09/23/costo-medioambiental-ropa

Nigeria textile Waste Market synopsis (2024) 6Wresearch. https://www.6wresearch.com.

N. Udeani. (2017). Tropical Built Environment Journal. http://www.tbejournal.com - Textile waste recycling: An innovative creativity for entrepreneurial sustainability in Nigeria.

Wojciechowska, M., and Grzegorz, K. (2024). Challenges and opportunities in Recycling Upholstery textiles: Enhancing high-density Fibreboards with Recycled Fibres.

Modern Waste Recycling (2021). The environmental crisis caused by textile waste. https://www.roadrunnerwm.com

GoodsAgain (2023). https://www.goodsagain.com.

Soehardi, K (2024). Weaving the waste out of Furnishing, A Textile Report. Karie Soehardi Consultancy.