

Textile Waste Disposal Upcycling Attitudes among Educated Youth in Bathinda, Punjab: An Analytical Study

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ABSTRACT

To minimize waste generation, the “3Rs” of the waste hierarchy—Reduce, Reuse, and Recycle—prioritize environmentally desirable strategies. *Reduce* focuses on minimizing the use of energy and raw materials; *Reuse* involves using items multiple times without reprocessing; and *Recycle* converts used materials into new products. Textile waste can be categorized as pre-consumer waste, generated during fibre and fabric production, and post-consumer waste, which includes discarded materials such as denim, cotton, wool, linen, and nylon that have already been used by consumers. With the growing emphasis on sustainability, designers increasingly transform textile leftovers into value-added items like bags, table mats, and scarves through techniques such as patchwork and embroidery. Therefore, the study aims to develop eco-fashion accessories from leftover denim fabric, with the objective to study existing textile waste management practices adopted by selected respondents. This study explored textile waste management among 90 female college students aged 20-30 in Bathinda, Punjab, using the waste hierarchy of reduce, reuse, and recycle. Data came from personal interviews with simple yes/no and multiple-choice questions, analysed by counting frequencies and calculating percentages. Key findings include 68.88% awareness of eco-fashion from waste fabrics, 62.22% interest in reuse, and top disposal method as giving away garments (43.33%). Most (65.56%) wanted to make accessories at home. These results suggest young women support upcycling denim waste into sustainable products, aiding India’s circular economy efforts.

Keywords: Textile Waste, Eco-Fashion, Upcycling, Women Practices, Reuse

INTRODUCTION

The waste hierarchy fundamentally emphasizes the principles of “reduce, reuse, and recycle,” offering a structured approach to minimizing environmental impact by prioritizing actions that prevent waste generation at the source. Among these, reuse plays a vital role as it extends the life cycle of materials without requiring energy-intensive reprocessing, thereby conserving natural resources. Textile waste, a rapidly growing global concern, can broadly be categorized into pre-consumer waste, generated as by-products during industrial processes, and post-consumer waste, which includes discarded garments such as denim, cotton, and other apparel items once they

reach the end of their use phase. In India, accelerated urbanization, increased consumerism, and fast-fashion trends have significantly contributed to rising volumes of textile waste, placing immense pressure on the existing waste management system. However, emerging eco-conscious initiatives, particularly the creative repurposing of textile remnants into value-added products, are offering sustainable alternatives. Transforming discarded denim into fashionable accessories such as bags, pouches, and scarves is gaining popularity, aligning with international circular fashion movements that promote resource efficiency and environmental stewardship (Nayak and Hegde 2023).

Growing awareness of environmental degradation

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has drawn significant attention to the challenges posed by textile waste, prompting researchers to explore sustainable material use and innovative waste management strategies. Kumar *et al.* (2024) in a study consistently highlighted that textile waste is one of the fastest-growing waste streams due to increased consumption patterns and shorter garment life cycles. According to several research findings, natural fibers such as cotton and denim, although biodegradable, still contribute substantially to landfills because of improper disposal habits. Moreover, the production of textiles, including dyeing, washing, and finishing, demands high quantities of water, energy, and chemicals, underscoring the need for extending textile life through reuse-based solutions. Scholars argue that upcycling, a creative form of reuse, not only reduces landfill burden but also adds aesthetic and functional value to previously unwanted materials (Babel and Mehta, 2019).

Research in sustainable fashion (Sharma, 2025) further reveals that consumer perceptions and attitudes play a crucial role in the adoption of eco-fashion products. Young consumers, especially college-going females, have been identified as a segment with strong inclination towards trends, experimentation, and social visibility, making them key drivers of eco-fashion acceptance. Studies indicate that when sustainability is combined with style, uniqueness, and affordability, young women are more likely to prefer upcycled fashion products over conventional items. Patel and Desai (2024) confirmed this behavioural shift, which is supported by the global movement toward ethical and circular fashion, where garments and accessories are designed to minimize waste, extend product lifespan, and promote responsible consumption.

Existing literature also highlights successful case studies where denim waste has been transformed into high-demand handmade items such as tote bags, laptop sleeves, jewellery, aprons, and decorative crafts. Denim, due to its durability, texture, and aesthetic appeal, is widely recognized as one of the most suitable materials for repurposing. Researchers emphasize that upcycling denim not only reduces fabric waste but also fosters entrepreneurship opportunities, especially for women and youth groups engaged in skill development initiatives. Additionally, studies suggest that training programs focused on waste utilization enhance environmental awareness and empower individuals to practice sustainable living in their daily choices (Wrangler India,

2025).

Together, these scholarly findings support the need for studies that blend sustainability with creativity, particularly among youth populations who can influence larger societal trends. The present research adds to this growing body of knowledge by exploring the development of eco-fashion accessories from denim waste and examining the textile waste management practices among young college females.

Aligned with this perspective, the present study focuses on developing eco-fashion accessories using discarded jeans and denim material among young women, a demographic known for its high adaptability to new fashion trends and innovations (Singh and Gupta, 2025). The study was done with objective to study textile waste management practices of selected female college students.

METHODOLOGY

Researchers picked Bathinda, Punjab for its scattered waste collection and no strong recycling rules. From there, 90 girls aged 20-30 years were selected on purpose because they follow fashion trends well. A simple interview schedule with open-ended questions was used. Data was arranged with simple statistical tools.

Objectives of the Study

1. To assess the level of awareness regarding reuse of discarded garments and textile waste accessories.
2. To identify the disposal methods adopted by respondents for discarded garments.

RESULTS AND DISCUSSION

Social-Personal Profile

Table 1 presents the social-personal characteristics of the respondents (n = 90). With respect to age, most of the respondents (61.11%) belonged to the 20–25 years age group, while 38.89% were in the 26–30 years category, indicating that the sample largely comprised young adults.

Regarding educational status, nearly half of the respondents (47.77%) were graduates, followed by 27.78% who had completed post-graduation, whereas 24.44% had education up to +2 level. This reflects a comparatively well-educated respondent group.

Table 1 : Social-Personal Traits (n=90)

Trait	Category	Frequency	Per cent
Age (years)	20-25	55	61.11
	26-30	35	38.89
Education	+2	22	24.44
	Graduate	43	47.77
	PG	25	27.78
Caste	General	65	72.22
	SC	15	17.78
	BC	10	11.11
Family Type	Nuclear	58	64.44
	Joint	32	35.56
Occupation	Agriculture	39	43.33
	Business	18	20.00
	Service	25	27.78
	Labour	8	8.89
Income (INR Monthly)	10k-50k	43	47.78
	50k-1L	47	52.22

In terms of caste distribution, a substantial proportion of the respondents belonged to the General category (72.22%), followed by Scheduled Caste (17.78%) and Backward Class (11.11%). Concerning family structure, 64.44% of the respondents lived in nuclear families, while 35.56% belonged to joint families, suggesting a predominance of nuclear family systems.

Occupational analysis revealed that 43.33% of the respondents were engaged in agriculture, followed by service (27.78%), business (20.00%), and labour (8.89%). With respect to monthly income, slightly more than half of the respondents (52.22%) reported an income between Rs. 50,000–1,00,000, whereas 47.78% earned between Rs. 10,000–50,000 per month.

Awareness and Reuse

The data revealed that a clear majority of the

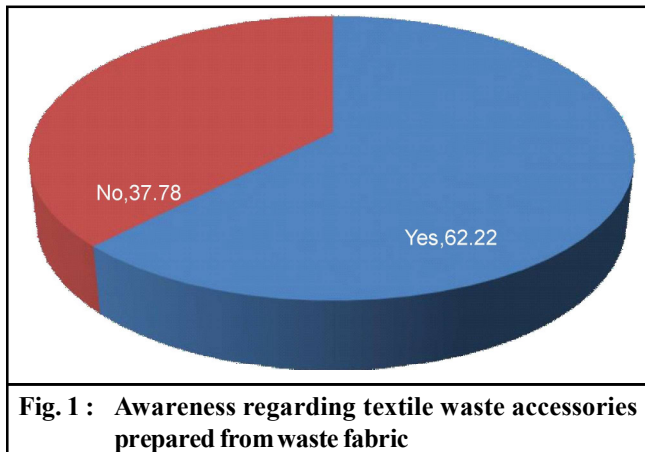


Fig. 1 : Awareness regarding textile waste accessories prepared from waste fabric

respondents (62.22%) expressed interest in reusing discarded garments, indicating a positive attitude toward sustainable clothing practices and waste reduction (Fig. 1). However, 37.78% of the respondents reported no interest in reusing discarded garments. This finding suggests that although awareness and acceptance of garment reuse are relatively high among the respondents, a considerable proportion remains hesitant, highlighting the need for increased awareness, motivation, and promotion of the environmental and economic benefits of garment reuse.

Fig. 2 depicts the relationship between income level and interest in reusing discarded garments. The data reveal that a substantial majority of respondents (78.89%) belonging to the low-income group preferred to reuse discarded garments, indicating greater acceptance of reuse practices among economically constrained households. In contrast, 21.11% of the respondents from the high-income group reported no interest in reusing discarded garments. This finding suggests that income level plays a significant role in influencing attitudes toward garment reuse, with lower-income respondents demonstrating a higher inclination toward reuse, possibly due to economic considerations as well as practical utility.

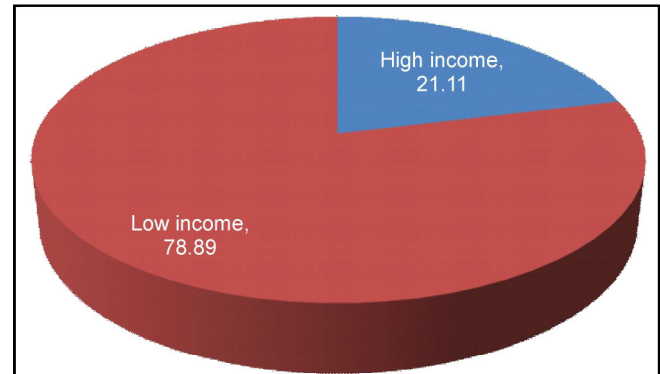


Fig. 2 : Response regarding the reuse of discarded garments

The data revealed that 45.33% of the respondents showed interest in reusing discarded garments for making household articles, indicating a preference for functional and utility-based products. This was followed by 33.33% of the respondents who were interested in converting discarded garments into personal accessories, while 21.34% expressed interest in making children's garments. The findings suggest that respondents favoured reuse options that offer practical value and regular usability, highlighting the potential of discarded garments as a

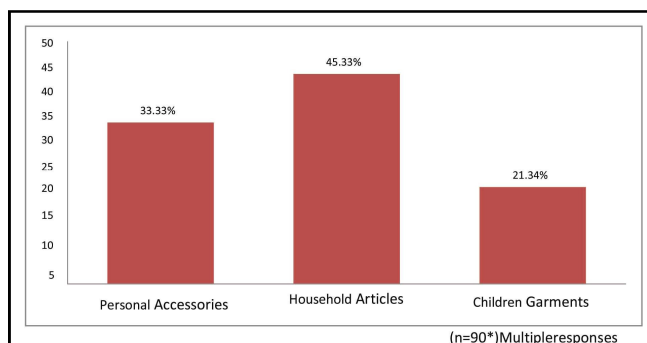


Fig. 3 : Response regarding there use of discarded garment multiple response

resource for diverse household and lifestyle products.

The results reveal that a majority of the respondents (57.77%) expressed interest in purchasing accessories made from waste fabrics, indicating a positive inclination toward sustainable and eco-friendly products. However, a considerable proportion of respondents (42.23%) reported lack of interest in purchasing such accessories. This suggests that while awareness and acceptance of products made from waste fabrics are emerging, there is still a need to enhance consumer awareness, improve design appeal, and address concerns related to quality and aesthetics to increase overall acceptance.

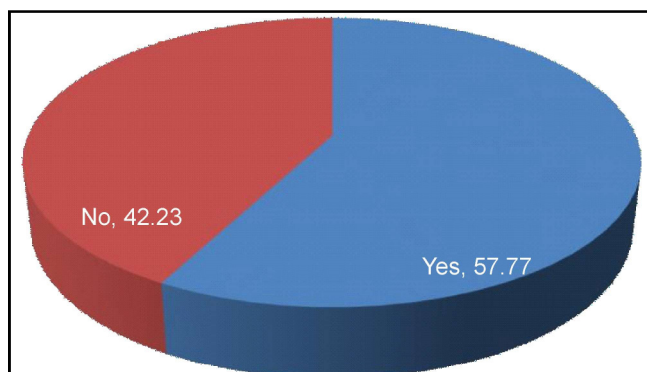


Fig. 4 : Response regarding the purchases of the accessories made from waste fabrics (n=90*)

Disposal Methods

The Table 2 shows that the most common method of disposal was giving the items to workers, reported by 39 respondents (43.33%), indicating a preference for reuse and direct utilization. This was followed by charitable donation, practiced by 17 respondents (18.89%), reflecting social responsibility and awareness toward helping others.

About 17.78% of the respondents disposed of items

Table 2 : Disposal Methods (n=90, Multiple responses)			
Sr. No.	Method	Frequency	Per cent
1.	Give to workers	39	43.33
2.	Dumping	8	8.89
3.	Dustbin	16	17.78
4.	Charity	17	18.89
5.	Burn	10	11.11

in the dustbin, while 11.11% resorted to burning, which may have negative environmental implications. The least preferred method was dumping, reported by only 8 respondents (8.89%).

Overall, the findings suggest that a majority of respondents favored reuse-oriented and socially beneficial disposal methods, though a notable proportion still followed environmentally unfriendly practices, highlighting the need for greater awareness regarding sustainable disposal methods.

Summary and Conclusion

The study included 90 respondents, most of whom were young adults aged 20–25 years (61.11%) and were well educated, with 47.77% graduates and 27.78% post-graduates. The majority belonged to nuclear families (64.44%), were engaged in agriculture (43.33%), and had a monthly income between Rs. 50,000–1,00,000 (52.22%).

A positive attitude toward garment reuse was observed, as 62.22% of respondents showed interest in reusing discarded garments, especially among the low-income group (78.89%). Household articles were the most preferred reuse option (45.33%). More than half of the respondents (57.77%) were willing to purchase accessories made from waste fabrics.

Regarding disposal practices, giving garments to workers (43.33%) and donating to charity (18.89%) were the most common methods, though some respondents still followed environmentally harmful practices such as burning (11.11%) and dumping (8.89%). Overall, the findings indicate growing awareness of sustainable textile practices with a need for further awareness to reduce improper disposal.

Promote workshops for home upcycling to cut landfill waste, empower via circular jobs like India's women-led sorting (53% female). Future studies test interventions; policy needs collection drives. Aligns with global shifts to recycle 59% textiles vs. 41% downcycle/incinerate (Das and Dwivedi, 2024).

Young urban women show strong potential for denim waste repurposing, favoring reuse over disposal amid rising textile pollution in India (Gupta and Singh, 2025). Policymakers should integrate college-based workshops to scale eco-fashion, enhancing sustainability.

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