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A comparative study of post-consumer fashion garment waste in Mumbai and Bangalore

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Abstract

This study explores the rising issue of post-consumer waste of fashion garments in Bangalore and Mumbai. The fashion industry, which is renowned for its quick cycles of production and consumption, has progressively contributed to environmental degradation by disposing of fashion garments. However, quick fashion and social media have contributed to the increased consumption of fashion apparel, which raises environmental issues and requires responsible consumer behavior. In order to reduce environmental harm, sustainable fashion methods are desperately needed because increased consumption raises pollution levels. Due to this increase in consumption, a significant amount of waste from fashion garments is produced and ends up in landfills and uncontrolled areas.

Fast fashion causes significant waste management challenges by making and discarding items quickly, increasing ethical and environmental problems. The need for more sustainable methods in the fashion industry is highlighted by the limited recycling options and uncertainties surrounding the future of clothing.

Keywords: Disposal, fast fashion, post-consumer waste, recycling

Introduction

Global consumption of fashion has been rising rapidly throughout the years. The industry has been able to generate a wide range of clothing due to advances in technology, which has contributed to unsustainable practices. Renowned fashion retailers produce new fashion lines at extremely low costs every two or three weeks. This strategy motivates customers to make purchases. Fashion garments that individuals choose to discard once they recognize they're no longer required are termed as post-consumer fashion waste. Maybe because they have been damaged, outgrown, worn out, or out of style are thrown out which end up in landfills. The manufacturing of fashion garments has an impact on the commercial output of fashion waste. The quantity of waste increases with production. Consumers embrace changes in style, fashion garments can become outdated quickly due to seasonal changes in fashion that encourages the replacement and discarding of garments. As a result, manufacturers will continue to produce large amounts of clothing with low durability in response to consumers' unsustainable purchasing behavior.

Due to the changing nature of the consumption and availability of resources, consumers are becoming less conscious of using the garments to their full potential, and the economic growth depends increasingly on the continuous marketing of new clothing and the disposal of the old ones that are thrown away because style standards encourage their obsolescence.

Aim

- To assess the post-consumer waste generated by disposal of fashion garments in Mumbai and Bangalore.

Objectives

- To analyze the creation of post-consumer waste in Mumbai and Bangalore.
- To understand if people are aware about appropriate methods of discarding.
- To evaluate consumers' disposal practices of unwanted clothes in Mumbai and Bangalore.
- To examine the challenges and opportunities associated with implementation of post-consumer waste.

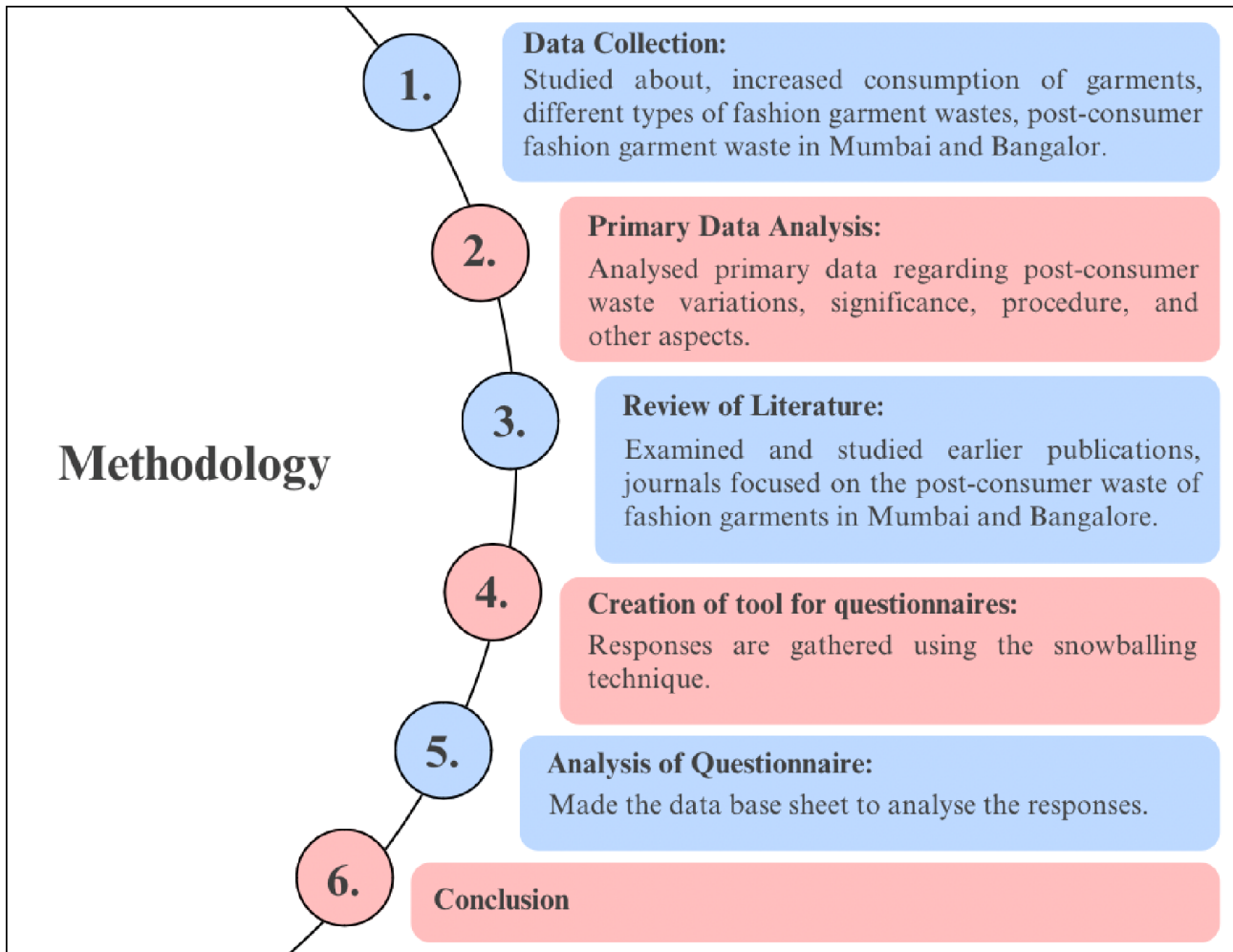
Hypothesis

- Post-consumer fashion garment waste is discarded responsibly in Mumbai and Bangalore.

Methodology

The comparative study was conducted between Mumbai and Bangalore. The sample for studying post-consumer fashion

garment waste was 50 cases of female and male in the age group of 16 to 40 years. An online survey was designed to study the clothing practices related to disposal of clothes and recycling and reuse. The data was collected from the consumers and analyzed in terms of frequencies and percentages.



Results and Discussion

With the help of snowballing data collection technique we gathered 50 responses, 25 from Mumbai and 25 from Bangalore of female and male across the age group of 16 years to 40 years. According to the objectives, data analysis has been done.

Clothing disposal behavior

Analyzing the clothing disposal behavior pattern of those 50 cases. A comparative research of discarding habits for unwanted clothes across different age groups in Mumbai and Bangalore reveals significant trends and variations in disposal practices in the graph below (Fig.1 and Fig.2). In Mumbai, the highest percentage of respondents across all age groups chose to donate unwanted clothes, whereas in Bangalore, donation rates were generally lower across all age groups compared to Mumbai, with the highest percentage being 36% in the 36-40 years age group. Sales of

unwanted clothes were less preferred across all age groups in both the cities. Recycling rates varied across age groups in both cities. Mumbai's recycling rates were generally greater than Bangalore's, peaking in the 22-29 and 36-40 age groups. Bangalore's recycling rates were more evenly distributed over the age range, with the 16-21 age group showing the most percentage. In Mumbai, the percentage of up cycling is similar between age groups, with somewhat higher rates in the 22-29 age range. Up cycling rates in Bangalore are similar to those in Mumbai, with the 36-40 age range having the highest percentage. There is a noticeable difference in the percentage of clothes thrown away as waste between all age groups in Mumbai and Bangalore. Both Bangalore and Mumbai have appropriate percentages of garments exchanged; however, Bangalore has greater rates in the 22-29 years and 36-40 years age groups, while Mumbai has higher rates in the 36-40 years age group.

Table 1: Disposal practices of unwanted clothes by the consumers of Mumbai and Bengaluru.

Discarding of unwanted clothes	Age in years							
	16-21	22-29	30-35	36-40	16-21	22-29	30-35	36-40
Cities	M	M	M	M	B	B	B	B
Donate	28%	28%	16%	8%	4%	16%	16%	36%
Sale	4%	0%	4%	0%	0%	0%	4%	0%
Recycle	8%	12%	4%	16%	12%	4%	4%	4%
Upcycle	4%	4%	4%	0%	4%	8%	4%	8%
Trash	12%	8%	4%	12%	12%	16%	4%	8%
Exchange with others	8%	8%	8%	4%	4%	4%	8%	16%

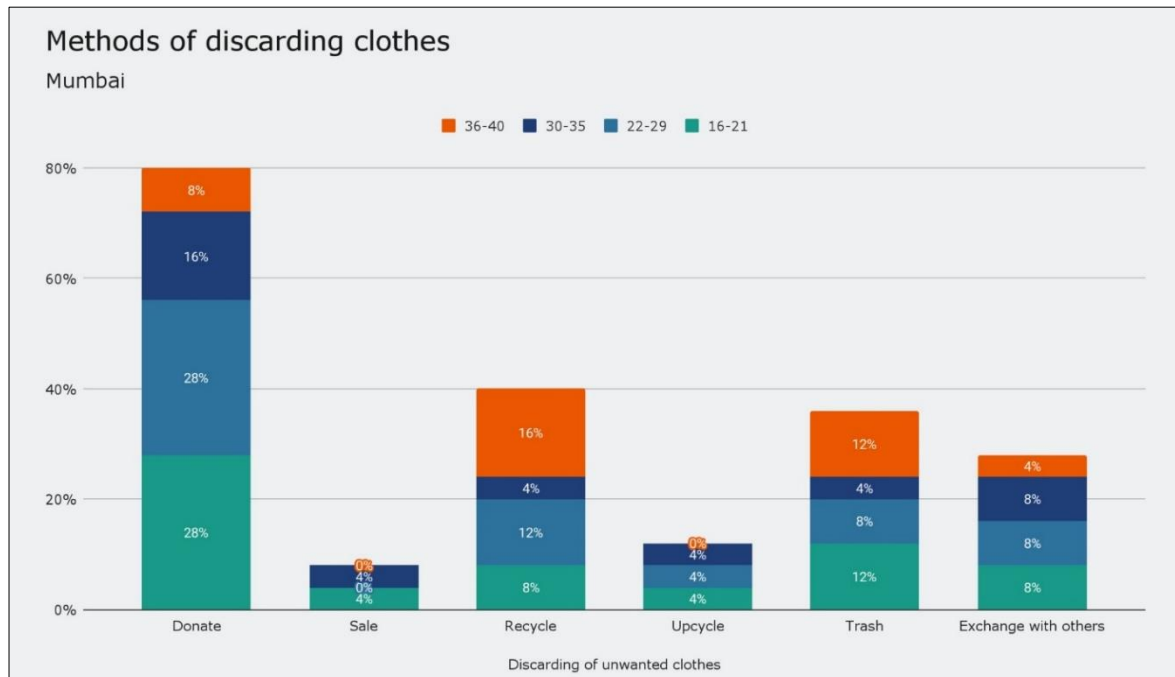


Fig 1: Disposal practices of unwanted clothes by the consumers of Mumbai and Bengaluru.

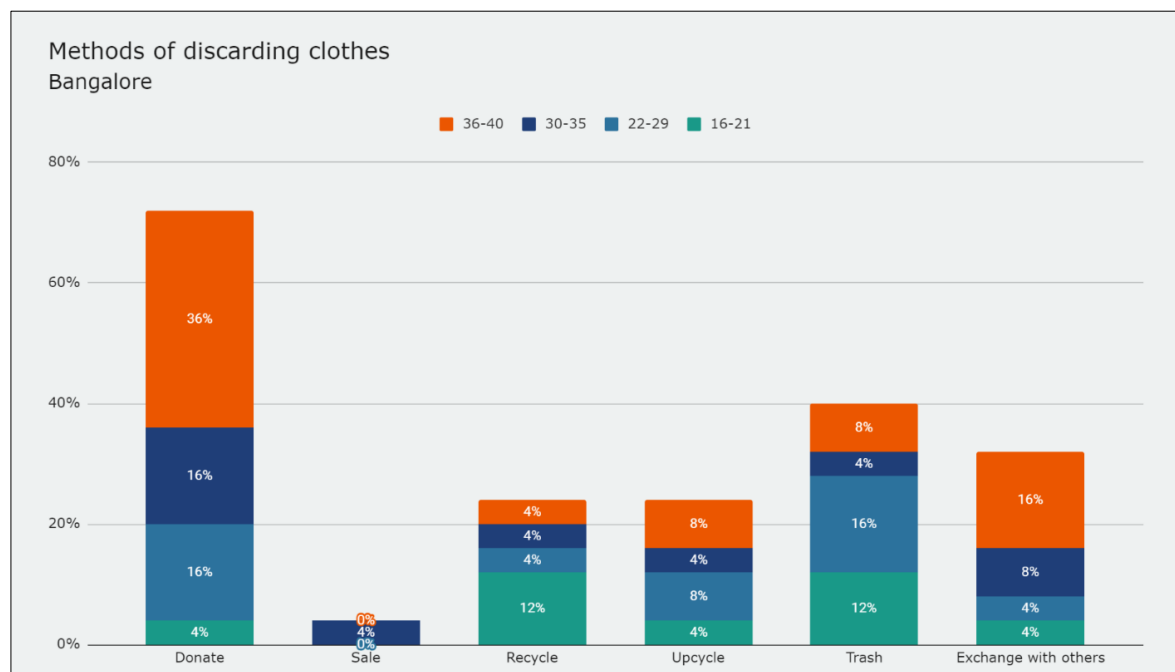


Fig 2: Disposal practices of unwanted clothes by the consumers of Mumbai and Bengaluru.

Environmental Awareness

The objective that has been selected for discussion was about respondent’s environmental awareness about growing pollution of post-consumer waste of fashion garments. The data in the given (Figure 1 and Figure.2) highlights

disparities in awareness among occupational groups in Mumbai and Bengaluru. Across both cities, landfill pollution appears to be a primary concern, followed by water pollution and greenhouse gas emissions. Pollution from landfills is a major worry for both students (32%) and

Professionals (32%) in Mumbai, whereas those in Professionals in Bangalore (48%) show the highest level of concern regarding landfill pollution. Students and full-time workers in Mumbai have higher levels of awareness (16%), while full-time workers in Bangalore have the highest levels of awareness (24%) of Water pollution. In both Bangalore and Mumbai, Professionals have the highest level of awareness of greenhouse gasses, while students and entrepreneurs have moderate awareness and unemployed people have the lowest awareness (4%). With respective percentages of 16% and 17%, students and full-time workers in Mumbai are the biggest sources of concerns for microplastic pollution. Once again, those with full-time jobs

make the largest contributions in Bangalore (20%) for microplastic pollution. Students have higher levels of awareness than other occupational categories, indicating that environmental education programs may be more effective within this demographic. People who work full-time, especially in Bangalore, show a high level of awareness, which may be attributed to their increased exposure to environmental issues at work or through social participation. Lower levels of awareness are shown by the unemployed population in both locations, suggesting a need for education and communication initiatives specifically aimed at this demographic about environmental issues.

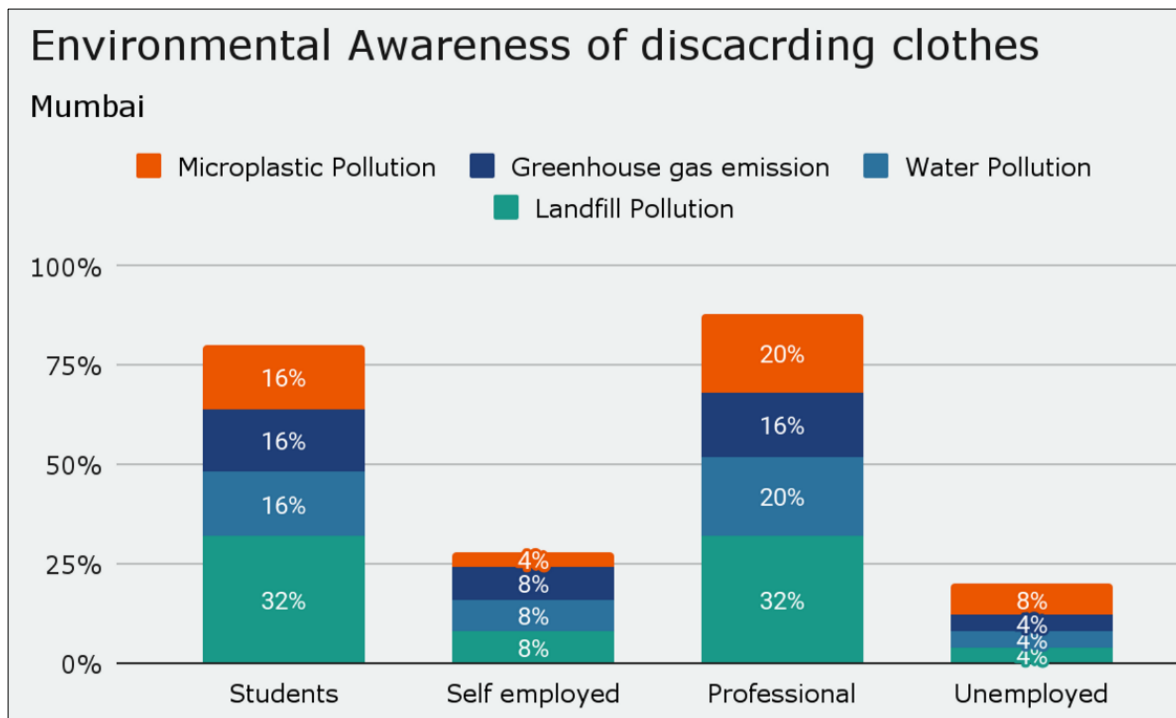


Fig 3: Awareness of discarding fashion garment waste among the consumers of Mumbai.

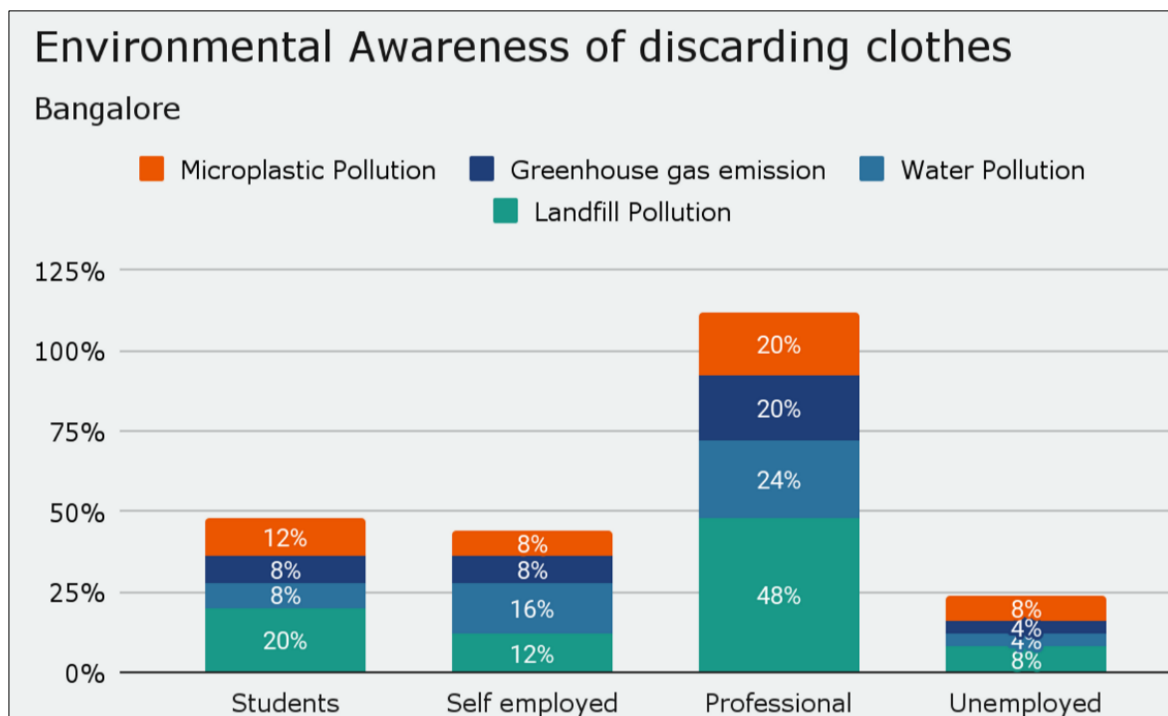


Fig 4: Awareness of discarding fashion garment waste among the consumers of Bangalore

Factors of discarding unwanted clothes

We studied the factors which are influencing the disposal of unwanted clothes was crucial in understanding the post-consumer waste of fashion garments in Mumbai and Bangalore across the age group of 16-40 years. In the given graph (Figure-5 and Figure-6), durability emerges as a key factor influencing the hesitancy to dispose of fashion garments among individuals aged 16-40 in Mumbai, whereas brand recognition significantly influences disposal reservation among respondents in Bangalore. Environmental impact was not the primary factor influencing hesitation in both cities. Poor fit reason exhibits similar percentages in both cities. Poor fit reason exhibits similar percentages in both cities. However, concerning quality, 16% becoming the highest of 16-21 year-olds in Bangalore show greater hesitation compared to Mumbai, whereas in Mumbai,

individuals aged 22-29 demonstrate higher hesitancy towards quality issues. Trend factor shows consistently moderate percentages across all age groups in Mumbai, whereas people in Bangalore also exhibit nearly equal hesitation towards the trend factor in all age groups except the 22-29 age group. Other reasons such as emotional attachment also demonstrate significant percentages across all age groups in Mumbai. However, in Bangalore, there is the lowest level of emotional attachment towards clothes, within the age group of 30-35 years. In terms of the uncomfortable design factor, Mumbai shows higher levels compared to Bangalore. In Mumbai, the age group of 30-35 years exhibits less concern about this factor, whereas in Bangalore, the age group of 22-29 shows less concern.

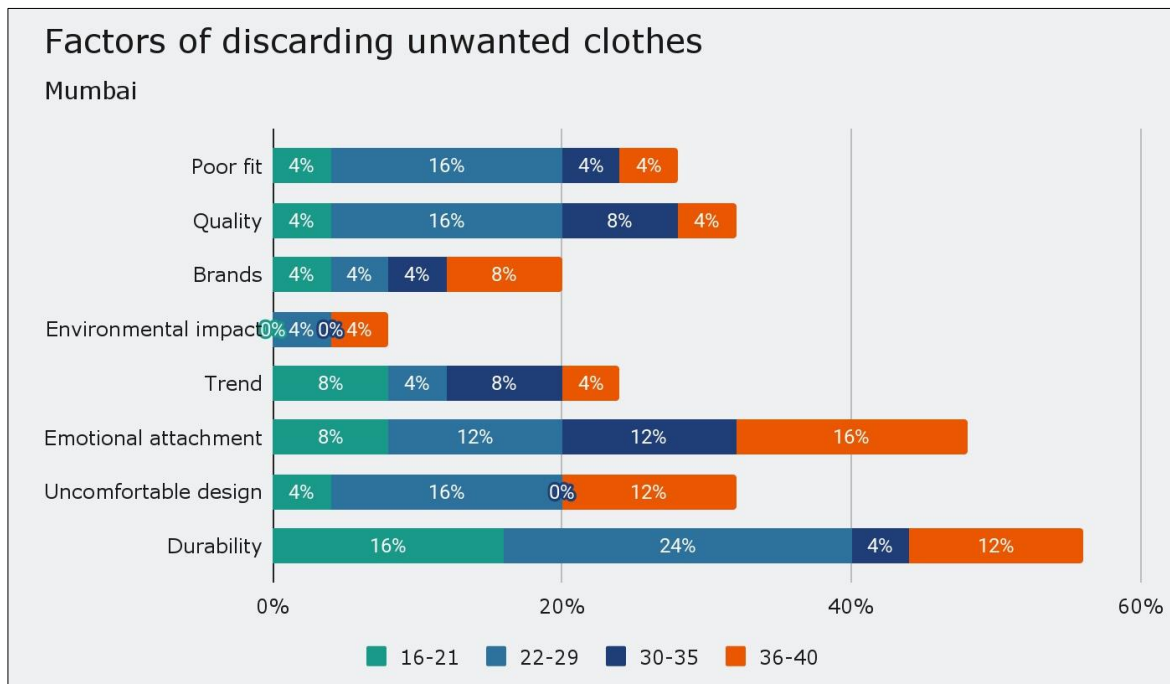


Fig 5: Discarding of unwanted clothes in Mumbai

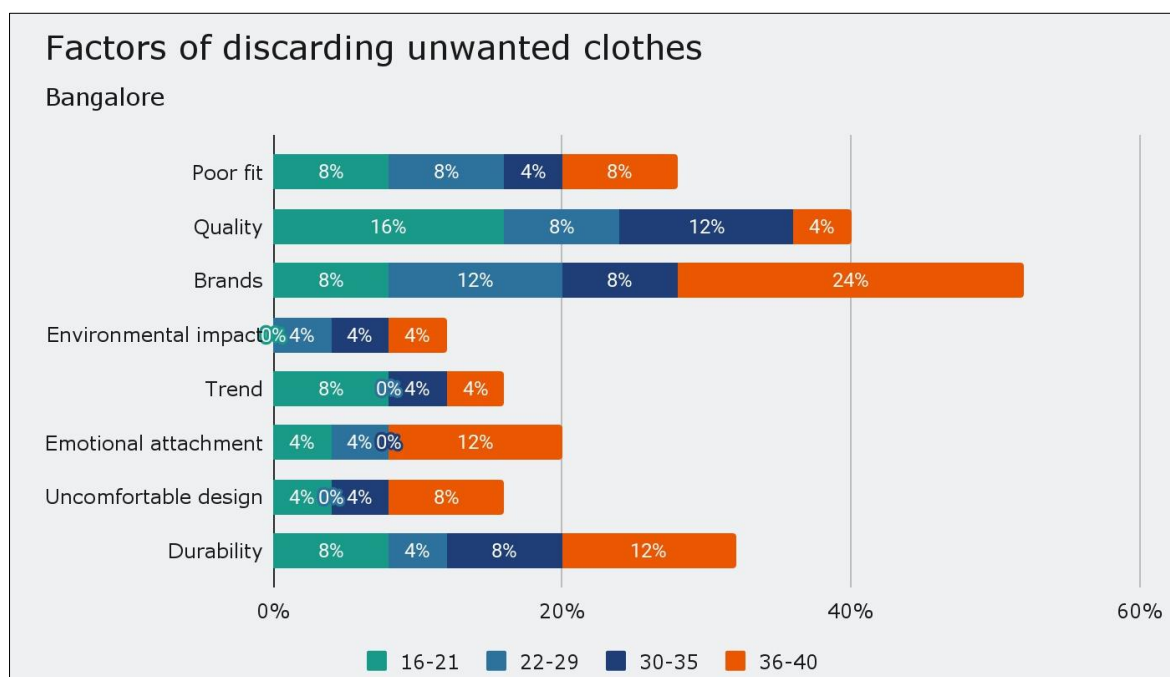


Fig 6: Discarding of unwanted clothes in Bangalore

Disposal challenges of fashion garments

The following data (Figure 7 and Figure 8) shows the challenges encountered by consumers in appropriately disposing of unwanted clothes vary among different occupational groups in Mumbai and Bangalore. According to the study, professional individuals in both cities face more challenges in recycling options. Conversely, finding donation centers presents a challenge across all age groups in both Mumbai and Bangalore, with professionals encountering this problem more frequently, at rates of 20% in Mumbai and 24% in Bangalore, respectively. In Mumbai, the challenge of repurposing or upcycling old garments is

more prevalent among students and professionals, accounting for 16%. Conversely in Bangalore, professionals are most affected by this challenge, with 28% encountering difficulties, while other occupational groups face this issue more evenly. More lack of awareness about sustainable disposal options was encountered by professionals with rates of 28% in Mumbai and 24% in Bangalore. Alternatively, self-employed individuals face this issue less frequently, with only 4% in Mumbai and 8% in Bangalore. Similarly, the unemployed in both cities face this challenge at a rate of 4%.

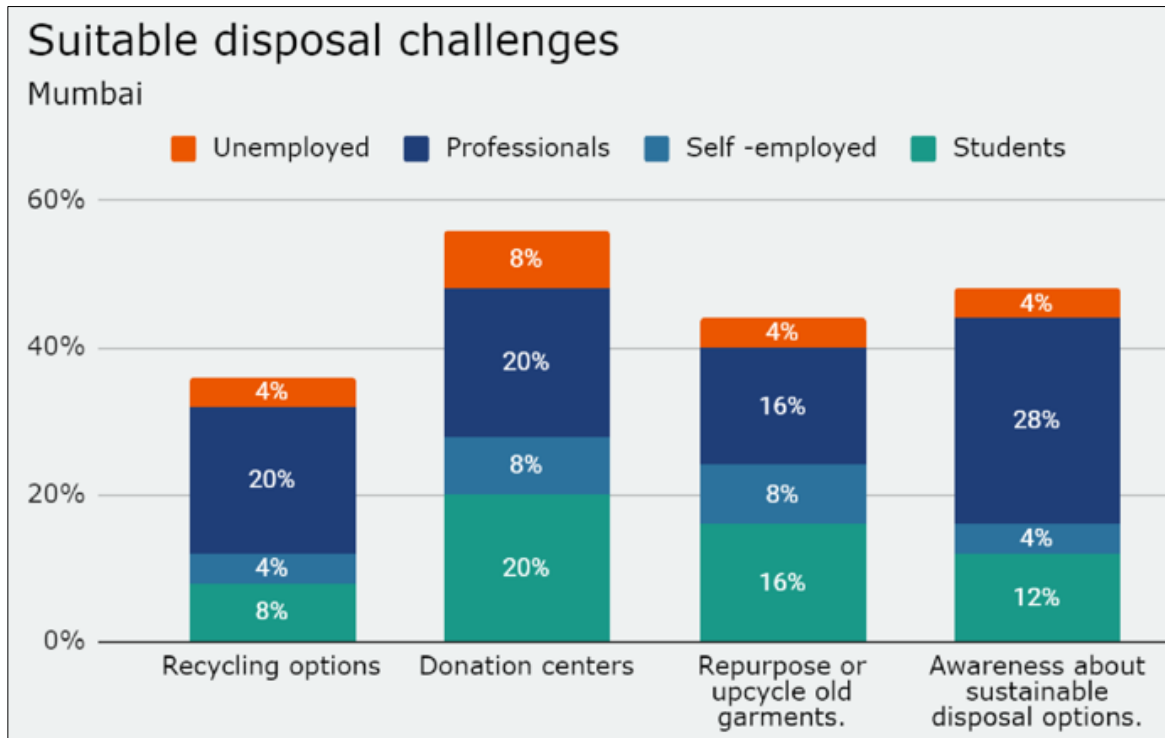


Fig 7: Challenges for disposal of unwanted clothes

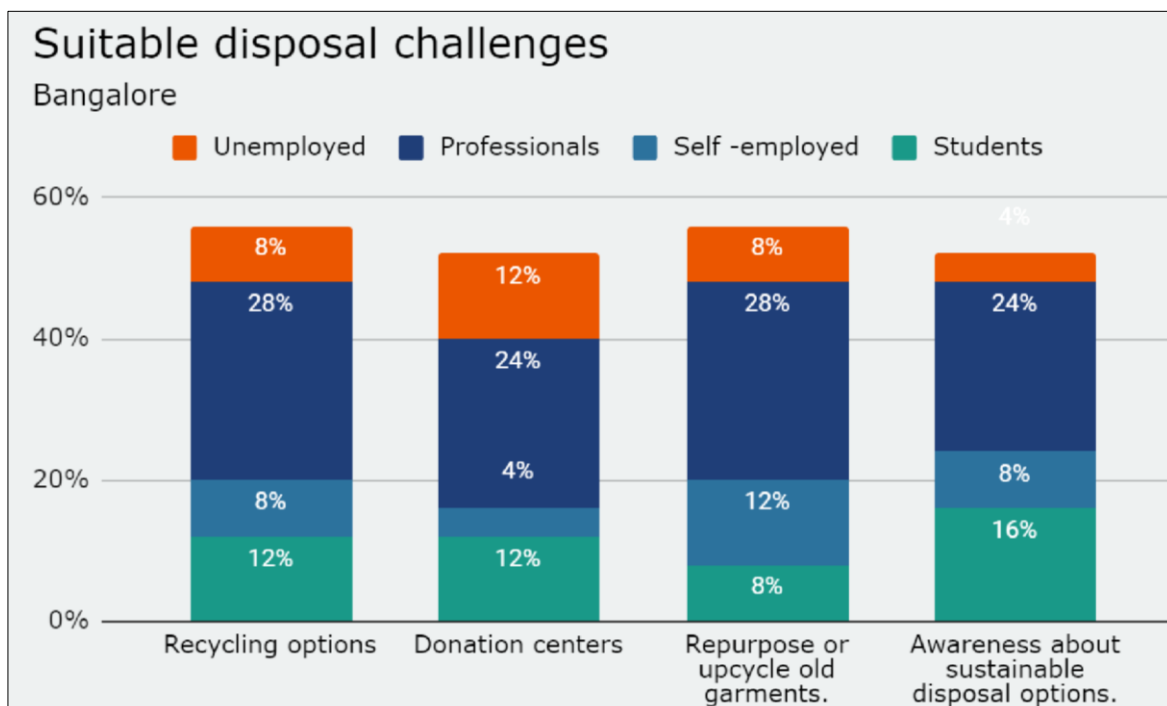


Fig 8: Challenges for disposal of unwanted clothes

Table 2: Challenges for disposal of unwanted clothes

Challenges faced by consumer for suitable disposal of unwanted clothes	Occupation							
	Students	Self Employed	Full time Employed	Unemployed	Students	Self Employed	Full time Employed	Unemployed
Cities	M	M	M	M	B	B	B	B
Recycling options	8%	4%	20%	4%	12%	8%	28%	8%
Donation centers	20%	8%	20%	8%	12%	4%	24%	12%
Repurpose or upcycle old garments.	16%	8%	16%	4%	8%	12%	28%	8%
Awareness about sustainable disposal options	12%	4%	28%	4%	16%	8%	24%	4%

Approaches for disposing of unwanted clothes

The data (Figure 9) demonstrate how various groups engage in sustainable decision-making at varying rates, which captures the nuanced nature of consumer behavior. The Mumbai population's preferences for sustainable options are depicted in the pie chart. Recycled products are the most popular option, scoring 40%, suggesting a strong preference for recycling. Giving second opportunity and Eco-friendly brands share a quarter of the choices, indicating that both concepts are highly valued by the public. By contrast, only 10% of the participants chose Second hand clothing, suggesting that this is the least popular sustainable option.

The study indicates that although recycling is strongly preferred, other sustainable actions are also fairly supported by the Mumbai population. Giving second chances to products is the most chosen sustainable practice in Bangalore, according to the pie chart fig(10), with 37.5% of respondents choosing this choice. Comparably, 25% of respondents prefer Eco-friendly brands above Recycled products. With only 12.5% choosing this option, Second-hand clothing is the least popular alternative. There is obviously a balanced preference for recycling and eco-friendly companies, indicating a high level of consciousness regarding sustainability in the city's consumer decisions.

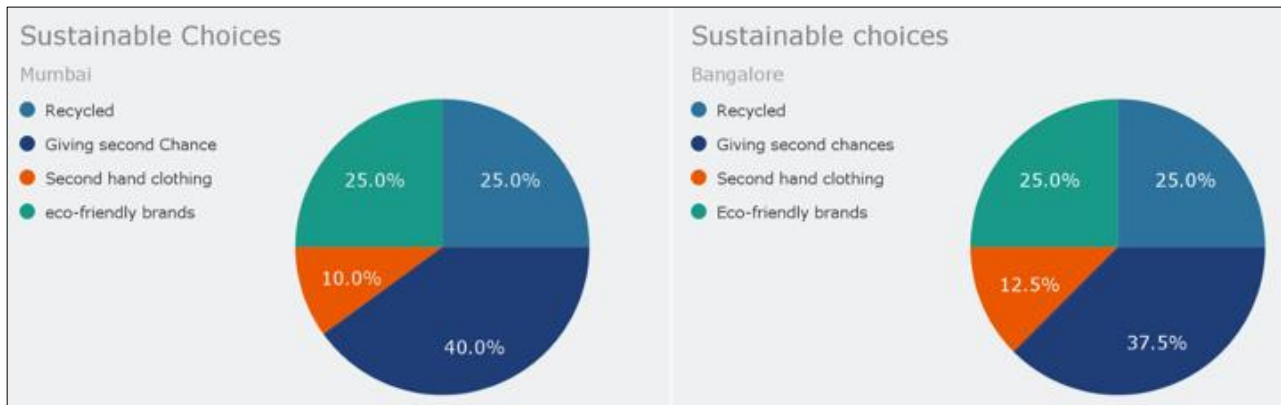


Fig 9: Sustainable choices of consumer

Conclusion

This study provides useful insights into the complex dynamics of consumer behavior and attitudes around the disposal of fashion clothes in cities, Mumbai and Bangalore. The data show that customers are aware of their purchasing habits and take the clothing's lifespan into consideration. Choosing classic, high-quality clothing and buying from eco-friendly fashion labels will cut down on post-consumer waste. Furthermore, minimizing environmental impact can be achieved by implementing techniques like upcycling, mending, and donating clothing items rather than throwing them away.

In order to enable customers to make more sustainable decisions, awareness and education are essential. Through education about the effects of post-consumer waste in fashion apparel, people may take an active role in promoting a more ethical and sustainable fashion sector.

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