

Recycling of Post-Consumer Apparel Waste in India: Channels for Textile Reuse

Bairagi N*

Department of Knitwear Design, National Institute of Fashion Technology, Bengaluru, India

Abstract

There is an increasing amount of post-consumer textile waste that is generated in India with an estimated population of above 1.33 billion. But limited studies have been carried out on the channels of recycling of post-consumer apparel waste in India. Therefore, a pilot study was conducted among young people in the age group of 20-30 years in India, using online survey. Additional information has been collected through ethnographic studies and interviews and observations. Expert in the business of pre-owned goods has been interviewed. Results showed that almost half of the respondents of the survey in India would like to discard the clothes that are no more in use. There is a lack of awareness on the channels available for donation of used clothing, through most of the respondents were willing to donate. The donated clothing mostly consists of upper wears. The channels of post-consumer recycling of clothes are mostly NGOs who use it for charity or up-cycle it to new products using a community of artisans, who work for their livelihood. At present there are few Indian brands that create designer products by recycling of post-consumer apparel waste. The other alternative channel that has developed in India is re-sale of pre-owned clothing using online app of companies and brands. Few small-scale industries in India convert the post-consumer apparel waste to fibres which are generally used as fillers for mattress, pillows, cushion etc. in the unorganized sector or converted to recycled yarns.

Keywords: Domestic product; Ethnographic; Textile clusters; Second-hand clothing; Cushion

Introduction

India with an estimated population of 1.33 billion in 2017 and textiles being 4 per cent of India's Gross Domestic Product (GDP), the annual consumer expenditure on clothing and footwear is almost 68 billion dollars [1-3]. Currently, the short lifecycles of apparel product due to rapid fashion cycles and increased buying power of Indian consumers in urban areas is resulting in significant amounts of post-consumer textile waste (PCTW) in the form of used clothing or even second-hand clothing (SHC). Post-consumer textile waste mainly originates from household sources and consists of garments or textiles which the owner no longer needs as it was. Though, recycling of textiles was a domestic craft in India and currently there are textile clusters and small scale industries to work on second hand imported clothing. These clusters also develop a range of products like recycled yarns, doormats, prayer rugs, blankets and bed linen. The leftover garment pieces are also sold as industrial wipers for the paints, chemicals and construction industries, for both local and international buyers in Japan and Australia, but there are limited studies to evaluate the channels of recycling of post-consumer apparel waste in India [4]. Therefore, the objective of this paper is to study the channels of recycling of post-consumer apparel waste in India through interviews with users and NGOs involved in recycling of post-consumer textile waste.

Research Method

A pilot study was conducted among young people in the age group of 20-30 years in India, using online survey during the month of September 2017. Additional information has been collected through ethnographic studies and primarily through unstructured interviews and observations. Expert in the business of pre-owned goods has been interviewed. Most of the respondents are from the metro cities of India. The questionnaire was mailed to 100 people, but only 37 responded for the survey study. It consisted of questions to study the clothing purchase frequency, number of clothes in the wardrobe, frequency of use of purchased clothing, category of clothes, donation practices

of used clothing, awareness on textile recycling practices, discarding habits of used clothing, methods of re-use of old clothing, etc.

Research Findings

The survey showed that 68% of the population shop every month for clothes. It was found that impulsive buying and actual need were mainly the reasons behind the purchase intention of new apparel. Most of the respondent's wardrobe consists of 45+ numbers of clothing dominated by top wear/shirts/upper wear over all the other categories. Tops/shirts/Upper wear comprised nearly of 88% of the clothing. Therefore, the post-consumer apparel waste mostly consists of upper wear, for the 20-30 years' olds. Few decades ago, most of the clothing that was recycled in Indian homes was sarees, dupattas and dhotis, which could be converted to other products like bags, blankets, cushion covers, curtains, etc. quite easily.

Almost 53% of the respondents preferred to discard their old clothing which is not needed in the wardrobe anymore. Few respondents wanted to hold on to certain clothing due to their personal reasons. A small percentage of young people in India also resale their used branded clothes and buy pre-owned clothing through online apps and websites like Elanic, Spoyl in, Etashree.in, Stylflip.com as observed by the researcher, though in the survey there has been no special mention of it by the respondents [5-8]. Majority of them

*Corresponding author: Nilanjana Bairagi, Department of Knitwear Design, National Institute of Fashion Technology, Bengaluru, India, Tel: 080-225-525-505; E-mail: nilanjana.bairagi@nift.ac.in

Received December 01, 2017; Accepted December 14, 2017; Published December 21, 2017

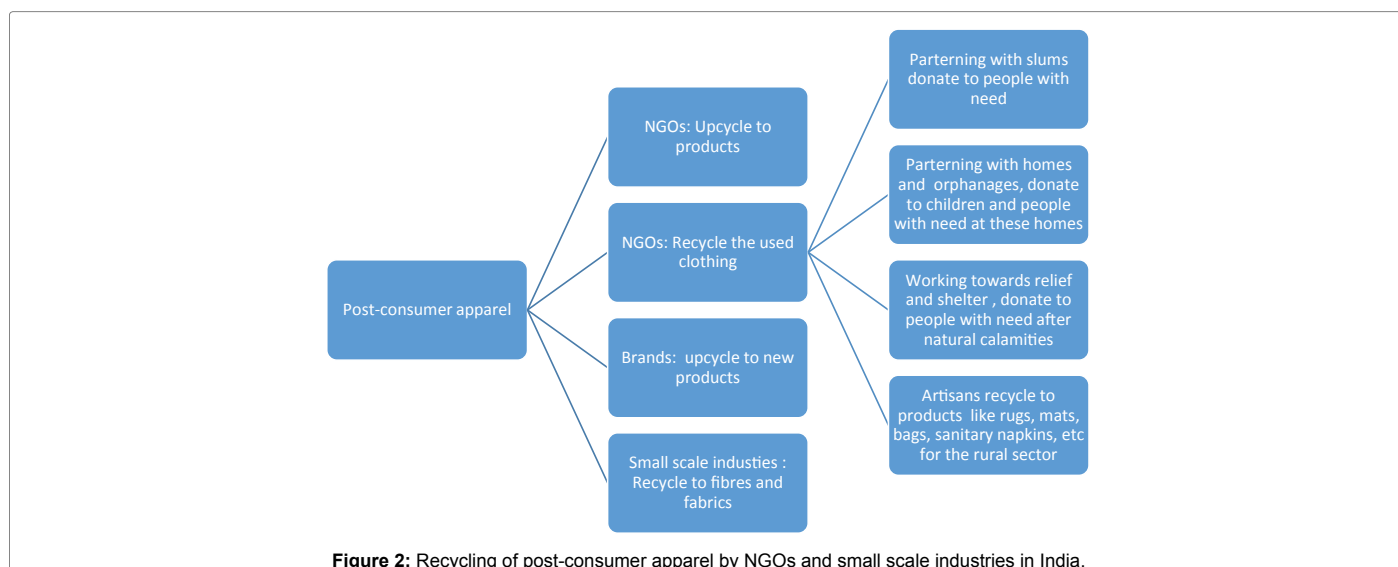
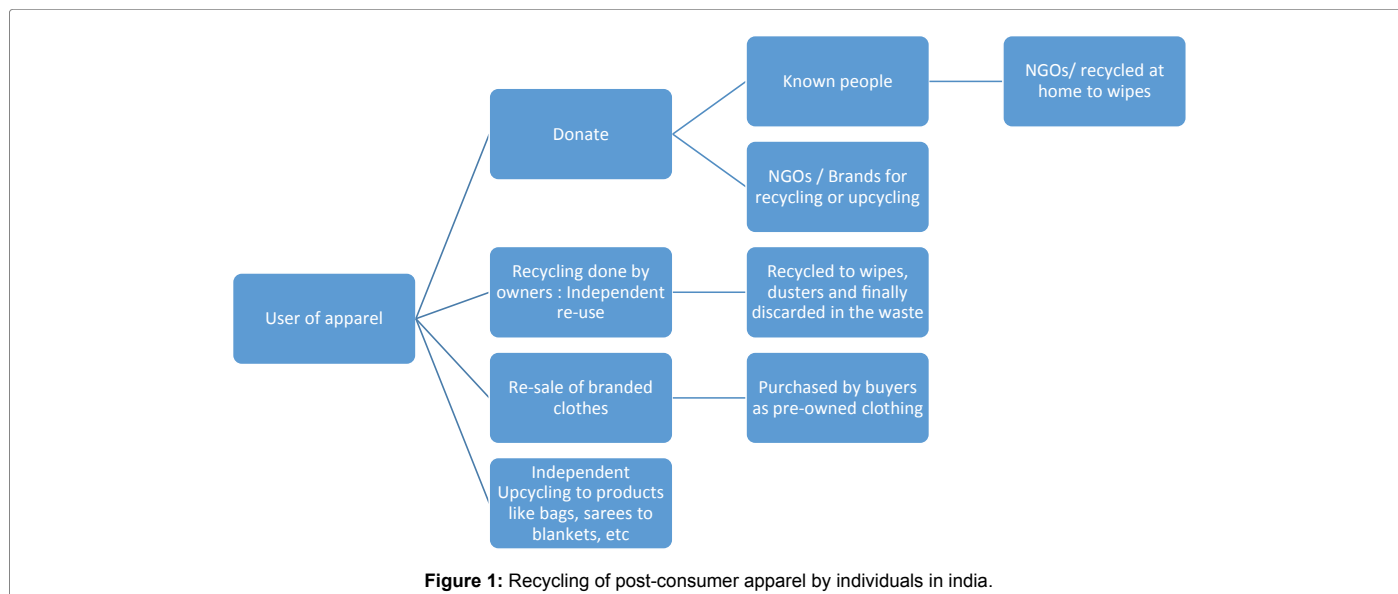
Citation: Bairagi N (2017) Recycling of Post-Consumer Apparel Waste in India: Channels for Textile Reuse. J Textile Sci Eng 8: 331. doi: [10.4172/2165-8064.1000331](https://doi.org/10.4172/2165-8064.1000331)

Copyright: © 2017 Bairagi N. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

discard their clothing by donating which accounts for 74%. In case the clothing is not in a good condition it is reused for household purpose like wipes and swabs or independent recycling is done. The pre-owned clothes are often passed down in the family or to the extended family members/helpers at home or donated to NGOs. It was found that few respondents prefer upcycling certain clothing individually or they would prefer professional help for up-cycling. It was also observed that many respondents were not aware about the channels of donation of used clothing.

The NGOs working with post-consumer apparel can be further classified according to the way they use the donated clothes. The clothes given to the NGOs are sometimes used by children and people in need of clothes in the shelter homes, some NGOs use it for rehabilitation and relief work post natural calamities in India. Some NGOs are involved in recycling like GOONJ, using a community of artisans for livelihood development. GOONJ has also won the prestigious Development Market place award from the World Bank on making a sanitary napkin out of waste cloth and has also been declared as Indian NGO of the year [9]. Many brands in India and NGOs work towards up-cycling of

the used clothing for further product development. NGOs like GOONJ converts used denims to school bags [9]. Brands like Doodlage, Mehera Shaw, Péro and House of Wandering Silk upcycle clothing and sarees to designer products [10,11]. Certain percentage of old clothes also land up in the unorganized second hand shops in India and a certain percentage are industrially recycled to fibres in semi-organized or organized sectors. The fabric pieces are shredded and opened up using carding machines to fibre form and are made into recycled yarns by small scale industries like “Khaloom” [12] or are used for multiple applications like stuffing of unbranded beddings, mattresses, pillows, cushion, etc. T-shirts and other knitted products are often torn into strips of fabric and woven to mats and rugs. The percentage of post-consumer apparel that goes in this sector could not be ascertained. On the other hand companies like “Pure Waste Textiles” near Coimbatore, Tamil Nadu; India recycles pre-consumer textile waste from the industries and converts into fibres, which are finally knitted into fabrics [13]. Therefore, Figures 1 and 2 show the model that is mostly followed in India for recycling of post-consumer apparel by individuals and NGOs.



A detailed study needs to be undertaken to evaluate the volume and percentage of clothing that follows each of these channels in India. A study has been undertaken in UK and an organized method of recycling clothes has been set up [14,15]. An organized channel of recycling also needs to be developed by the private labels and brands in India to prevent clothing from being discarded in the waste and to encourage efficient recycling of post-consumer apparel.

Conclusion

It was observed that almost half of the respondents of the survey in India would like to discard the clothes that are no more in use. There is a lack of awareness on the channels available for donation of used clothing, through most of the respondents were willing to donate. The donated clothing mostly consists of upper wears. The channels of post-consumer recycling of clothes are mostly NGOs who use it for charity or up-cycle it to new products using a community of artisans, who work for their livelihood. At present there are few Indian brands that create designer products by recycling of post-consumer apparel waste. The other alternative channel that has developed in India is re-sale of pre-owned clothing using online app of companies and brands. There other channel involves the small-scale industries who convert the post-consumer apparel waste to fibres and yarns. The fibres from the shredded clothing are generally used as fillers for mattress, pillows, cushion, etc. in the unorganized sector or converted to recycled yarns.

A detailed study needs to be undertaken to evaluate the percentage of clothing that follows each of these channels in India. Additionally organized channels of recycling also need to be developed by the private labels to prevent clothing from being discarded in the waste

and to encourage efficient recycling of post-consumer apparel in India.

Acknowledgement

The author is grateful to Ms. Nimisha Bathla for her contribution in conducting the survey research.

References

1. Indian States Population (2017) Population of India 2017.
2. Indian brand equity foundation (2017) Textile Industry & Market Growth in India.
3. Fashion united (2014) Fashion industry statistics India.
4. Bairagi N (2014) Recycling of Textiles in India. J Textile Sci Eng 2: 003.
5. <https://www.etashee.com>.
6. <http://elanic.in/>.
7. <https://www.etashee.com>.
8. <http://stylflip.com/site/shop/products>.
9. <https://inhabitat.com/goonj-recycling-textiles-in-new-delhi/>.
10. <http://www.doonething.in/content-hub-archive/2016/7/4/eight-indian-fashion-start-ups-committed-to-upcycling>.
11. <https://www.doodlage.in/product-category/new-in-men/>, accessed on 31st October 2017
12. <http://www.khaloom.com>, accessed on 30th October 2017.
13. <https://pulitzercenter.org/reporting/india-two-entrepreneurs-turn-waste-business>, accessed on 31st October 2017.
14. <http://www.traid.org.uk/about-traid/> accessed on 31st October 2017.
15. <http://randd.defra.gov.uk/>.