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Awareness generation among women for value addition of post consumer textile waste

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Abstract
Food, clothing and shelter to live is considered as essential necessities for human beings. Clothes help to make the most of our good features, express our personality, and at the same time conform our way of life or protect our body. Production of textiles is an expensive process. Seasonal changes in fashion means that clothes become outdated quickly, encouraging replacement and disposal of clothes. The clothing is discarded for various reasons. Many researches stated that the amount of household fabric waste is increasing every year due to fast fashion. Post-consumer textile waste (PCTW) is a largely unexplored product with strong reuse and recycling prospective. It is an efficient resource to explore and develop novel skills. It has huge prospective to generate economic empowerment and has the power to convert trash to treasure. The roots of the current research are rooted in the traditions of Indian culture and religion. Thus it is an foreseeable tool to revive the past practices of most advantageous utilization, reutilization and recycling of post-consumer textile waste. Utilizing waste by reducing, reusing and recycling are the most powerful way by which individuals, households, institutions and businesses can protect their communities and the environment. Women are the one who designs and sews clothing material into value added articles or finished product. Through tailoring skill to make creative, stylish and contemporary designs as per the market demands by using post consumer textile waste. Hundred respondents engaged in stitching of women wears and ready to give responses for the present study were selected purposively from Udaipur city to collect information type of articles and designing skill used for utilization of post consumer textile waste i.e. types of textile waste available, type of articles develop and types of skill used for decoration of articles. The information was collected using self-structured interview schedule and by observations. The maximum amount of textile waste available with women was in the form small fabric pieces followed by large fabric pieces. Women used large fabric pieces for making clothing articles, furnishing & utility articles. Post consumer textile waste are low cost raw materials and many Indian craft enterprises are also adapting traditional skills to create eco products, by reclaiming waste, recycling it and extending the life of a material, and object. It can be used by women entrepreneurs to start a small scale business.

Keywords: Fabric, waste, utilization, skill, entrepreneurs, post-consumer textile waste

Introduction
The garment industry produces garment-cutting waste fabric depending on production techniques and product range in the garment textiles sector. Considerable amount of discarded cloth is dumped in open areas and incinerated after removing small percentage for recycling and reuse. This accumulation of cloth waste from all over the country causes certain serious environmental problems and health hazards. It is likely that in India, some percent of waste is reused and recycled, and some are incinerated annually. In most instances, they are combusted under adverse conditions, generating toxic gases. Discarded clothes originate both from the household consumer sector and the industrial manufacturing sector. With the expansion of the industry, the problem of waste disposal has become a major issue. At present, open dumping and incineration are the main practices of disposal. Open dumping contributes to the formation of leach ate as it decomposes, which has the potential to contaminate both surface and groundwater sources. Commercially, textile waste generation is influenced by the production of textile goods, higher the production, the greater the amount of waste. This is in turn a function of consumer demand, which is influenced by the state of the economy. While this may have a limited impact on the waste production in the manufacturing sector, it can have a much greater influence on the production of household textile waste. Consumers react to

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changes in fashion both in clothing and household interior designs. Seasonal changes in fashion mean that clothes can become outdated very quickly, and this encourages the replacement and disposal of outdated, yet good quality garments. Consequently, manufacturers will increasingly develop high quantities of low durability clothing in response to a 'throwaway society'. Economic prosperity also influences this trend, as the production of textiles increases with consumer spending, so does waste production from both the manufacturing and household sectors People today have many more clothes and throw them away when they no longer want them. Recent statistics estimate that 700,000 tons of fabric ends up in the landfills each year. We all have discarded clothes that we no longer wear, with a little inspiration, we can recycle discarded cloth to develop bio-fertilizer. Management of discarded cloth has become one of the problems we are facing today. The rapid increase in the volume of discarded cloth is one of the aspects of the environmental crisis, accompanying recent global development. Disposal of discarded cloths can be done by methods like land filling, incineration, recycling, conversion into biogas, and composting. Most common practices of waste processing are uncontrolled dumping which causes mainly water and soil pollution.

Methodology
Present study was conducted in Udaipur. Hundred respondents were selected purposively having the knowledge of stitching and willing to learn about value addition of post consumer textile waste. Four trainings were organized, in each training there was twenty five respondents The self structured knowledge test included both open ended as well as close ended and dichotomized response (Yes/No) type questions. To assess the gain in knowledge after exposure of the respondents to the value addition of post consumer textile waste post test was administered. Same questionnaire was used for pre and posttest regarding four major aspects of Post-consumer textile waste. Forty statements were prepared related to selected aspects. Scores were assigned to each question keeping in view its relative importance. Gain in knowledge was categorized as poor, average and good and are mentioned in table number.

Results and Discussion
This section deals with the preliminary survey of the respondents for the purpose of the study, personal attributes of the respondents was studied

Table 1: Personal attributes of the respondents N=100

S.no.	Aspects	Categories	Percentage
I.	Age (in Years)	20-30	30.0
		30-40	70.0
II.	Caste	SC/ST	30.0
		Backward (OBC)	26.0
		General	44.0
III.	Family structure	Nuclear	40.0
		Joint	60.0
IV.	Family size	Small (up to 4 members)	32.0
		Medium (up to 5-8 members)	22.0
		Large (more than 8 members)	47
V.	Education	Up to Middle	22.0
		Up to Metric	16.0
		Up to high school	34.0
		Up to Graduate	28.0
VI.	Monthly income of family	10, 000- 20,000	56.0
		20,000- 30,000	23.0
		More than 30,000	21.0
VII.	Self-monthly earning by tailoring	Up to 5000/-	84.0
		Up to 10,000/-	2.0
		More than 10,000/-	14..0
VIII.	Family occupation	Job/ Service	62.0
		Business / Independent Profession	26.0
		Others	12.0
IX.	Interest training	Yes	80.0
		No	20.0

Age: The data in table shows that majority (70%) of respondents were in the age group of 30-40 years, 30% were between the age group of20-30 years the age group.

Caste: Data in table1 shows the caste wise distribution of the respondents which highlights that 44 % respondents were from general caste followed by scheduled caste (30%). Only 26 % respondents belonged to backward caste.

Family structure: Table 1 illustrates that 60 % respondents belonged to joint family and remaining 40 % were from nuclear family.

Family size: Table 1 depicts that 47% of respondents had large family, 32 % of respondents had small family and only 22% of respondents had medium family.

Education: The data in table 1 brings to light that 34 % of respondents had educational up to high school and 28% respondents had education up to graduate level. 22% respondents had education up to middle school and 16 % respondents had educational up to metric school The literacy rate among the respondents was reasonably good.

Monthly income: The most significant and vital factor which has its bearing on the economic status of the family is its

income. The standard of living of a family is based on the economic condition of that family. It is therefore, imperative to have a glance at the economic returns of the household under the study. Table 1 depicts that 56.0 % of the respondents belonged to the family having monthly incomes in the range of 10,000 to 20,000 and 23 % of respondents belonged to the family having monthly incomes in the range of 20,000 to 30,000. Just 21% of respondents belonged to the families having monthly income more than 30,000.

Self-monthly earning: Table 1 demonstrates that majority of respondents earned more than 5,000 per month While 2% respondents earned up to10,000 per month, just 14.0 % respondents earned more than 10, 000 per month.

Family occupation: Table 1 gives the picture of the family occupation/occupation profile of the respondents. It states that major proportion of responders (62.0 %) were associated with job/service sector, followed by 26% responders who were associated with business/ independent profession. and 11% responders were related to other occupation profiles.

Interest in training: When the respondents were asked

whether they were interested in training, it was found that 80% were and the remaining 20.0% were not. Further it was concluded that only few respondents were aware about the problem of textile waste and only a handful of them were concerned about the seriousness of the issue.

Type of work: The analysis of facts collected during the interview also showcase that, type of work done by women, equal percentage (50%) respondents were doing stitching work and all type of work related to garment stitching respectively, 35 percent respondents were involved each in embellishment work and 20 percent involved in alteration/repairing work (Table 2).

Table 2: Type of work of done by women n=100

S. No.	Type of work*	Percentage
1	Stitching	50
2	Embellishment work	35
4	Alteration/repair	20
5	All types of work related to garment stitching	50

Multiple response

Table 3: Percentage distribution by pattern of discarding post - consumer textile waste n =100

Aspects	Attributes	Always %	Often %	Sometimes %	Rarely %	MPS
Passing- on	Relatives	13.0	13.0	14.0	60.0	44.75
	Friends	9.5	11.0	11.0	68.5	40.37
	Maids/servants	59.0	39.0	2.0	0.0	89.25
	Siblings	16.0	23.0	31.0	30.0	56.25
Disposal channels	Garbage/ dustbin	00	3.0	32.0	65.0	34.5
	On roads	00	0.0	42.0	58.0	35.5
	Open areas	00	4.0	13.0	83.0	27.25
	Water bodies like rivers, lake, etc	0.0	0.0	12.0	88.0	28.0
Destruction Channels	Burn	0.0	13.0	24.0	63.0	34.25
	Buried / composting	0.0	7.0	6.0	87.0	28.25

As per the table 3 when the respondents were asked to whom they prefer to give their unwanted textiles most of the responded that maid and servants is the most preferable option (59%). Further 39 percent responders were of the opinion that they often give their discarded textiles to maids and servants. While 60, 68.5 and 30 percent responders respectively believed that they rarely give away their disposed clothes to relatives, friends or siblings. 23 percent respondents said that they give their discarded clothes to siblings.

Giving disposed clothing to maids and servants is the most comfortable option as they welcome such gestures with open heart, on the contrary relatives is the least preferred option as they are mostly judgmental about the apparel given. Respondents also commented that mostly those apparels which are in good condition are passed on to siblings or friends.

For instance, when it comes to discarding unwanted garments, the reasons indicated by most consumers pertain to the value or price of the item, for instance, originally valuable or expensive items. Passing these items on to family members and friends, one of the main disposal channels indicated, appears to be a suitable format for reusing these valuable pieces.

The above table 3 was fabricated by analyzing the different throwing patterns of respondents. It was observed that most of the respondents (65%, 58%, 83%, 88%) rarely throw away textiles in garbage, on roads, on open areas and in water bodies. Adding on 32 and 42 percent respondents were of the

opinion that they rarely throw textiles in garbage or on roads. Despite the fact 3% and 4% responders respectively often throw away fabrics in garbage and in open areas. This makes it clear that most of the respondents are aware about the harmful effects of directly throwing away fabrics. Most of the apparels thrown in water bodies have some religious and sentimental value.

The above table 3 fabricates the frequency distribution of respondents regarding the ways to destroy discarded textiles. It is implicit that no respondents always took to destroying fabrics rather most of them rarely took to burning or burying (63% and 87%). Nonetheless 13 and 7 percent respondents often took burning and burying for destroying discarded fabrics.

It is also stated that the study of consumers' motives for disposing of unwanted clothes, especially as garbage disposal, certainly is a sensitive topic. As Laitala and Klepp (2011) [5] report, only very few respondents admitted to throw their old clothes into the garbage.

Training to respondents on value addition of post consumer textile waste and impact assessment:
Impact assessment was done by organizing training program for selected respondents. The activities in training programme included information dissemination through lectures and interactive sessions and hands on experience. Several queries raised by trainees were solved by the researcher confidently. A booklet entitled "*kabaad se jugaad*" emphasizing on

innovative and easy ways to reutilize PCTW was also distributed to the respondents in training. Several internet sites and contacts of resource persons were also shared with

the trainees for further exploration and study. The purpose of training was awareness generation among women for value addition of post consumer textile waste.

Fig 1: Awareness training on value addition of post-consumer textile waste

Assessment of gain in knowledge through pre and post test: Reusing Post-Consumer Textile Waste has several advantages from the point of view of economic and environmental benefits. In the view of same, an attempt has been made to determine the existing level of knowledge before providing training to the respondents in the area of reusing. The gain in knowledge of the respondents was explored through knowledge test.

Table 4: Percentage distribution of the respondents by gain in knowledge N=100

Knowledge With Score Range	Number of the Respondents (%)	
	Pre test	Post test
Low (0-33)	87.0	0.00
Medium (34-66)	13.00	23,00
High (67 & above)	0.00	77.0

Perusal of table 4 indicates that in pre-test majority of respondents (87%) had low knowledge followed by 13.0 percent of respondents who had medium knowledge. Post test revealed the significant increase in knowledge as 23 percent respondents falling in medium knowledge level and 77 percent in high knowledge level.

The findings are in agreement with the observations of (Rana *et al*, 2013) [4] who highlighted that the training is vital to enhance the innovation, create confidence and inculcate efficiency in an individual. Training is meaningful only if it is need based and brings attitudinal change to establish own enterprises.

Conclusion

The findings showed that significant improvement in the knowledge of respondents was found as a result of exposure to training on "Reusing Post-Consumer Textile Waste". Hence, this training makes a contribution to the emerging discipline of textile reutilization by demonstrating that difficulties in discarding are a result of lack of knowledge and awareness. Present study has been made with an effort to

aware individuals, researchers, institutes, Government and non-government organizations regarding extremely harmful effects of Post-Consumer Textile Waste on environment and how it can be converted into a potential resource for economic empowerment.

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