Exploring the potential of Chindi (textile waste) for producing quality products for women empowerment

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Abstract

The research is conducted in the slums of sector 25, Chandigarh, which is a part of larger research study-Chindi: An Art of Textile Waste Management. The study seeks development of tools for converting textiles waste from various sources into Chindi Product. Chindi is a term used to describe the textile waste, which has been cut in the strips, ranging from ½’’ to 2 ½’’ width. Based on secondary data, techniques are identified and classified which can be employed in converting textile waste to useful products. In the present study, a group of 20 women was formed on the basis of their interest in learning new skill for increasing their earnings in near future. A pretest was administered to test their knowledge of using Chindi as raw material, understanding of quality and colour aesthetics. Tools were developed for the methods employed for the segregation of waste on the basis of colour and converting fabric scrape in pre-identified second stage raw material. The testing of second stage raw material for consistency in quality and colour aesthetic is limited to assessment of Chindi products developed by the researcher. The pre and post test were conducted that showed noticeable improvement in the skills of making Chindi twinning balls with further scope of improving the quality and colour understanding of the group and 80% satisfaction in the method adopted for instructions.

Keywords: Textiles waste, Chindi products, basic colour, women empowerment

1. Introduction

In India, textile and clothing is the second largest industry in generating employment after agriculture. It is also one of the largest industries that produce waste at each stage starting from fiber production to manufacturing of end products. Human desires for fashion and technological advancements have ignored this fact for centuries. Materialistic growth and joy of continuous change has gripped human fancy to such an extent that the rate of production is increasing at much higher pace than population growth. Basic need of clothing changed with changing roles of males and females in the society. Clothes are not merely looked upon as article of necessity but the medium to express individual personality. Production of clothes for different occasion, profession, recreational activity and religious ceremonies indirectly put pressure on people to buy clothes for all of events separately. In order to conform to social status or to express superiority, clothes have become an instrument. Individualistic styles and designs by renowned designer are preferred by elite and fashion leaders and knockoffs are mass produced. These desires have changed our society drastically in last two centuries. The result is overflowing closet with garments which are of good quality but not in use. We were so busy in materialistic growth, that side effects of the same have been overlooked. End of 20th century and beginning of 21st century has come with the realization of the harms we have been doing for future generations. The new terms like up cycling, remade, reclaimed, re-fashioned started surfacing to support growing trend of sustainability. High rate of production with chemical processes and finishings which were acceptable for satisfying egos and self centered happiness raised many questions related to carbon footprints. There are tons and tons of textile waste which either goes to incinerators or to landfills which is putting pressure on mother earth. Clothes when end up reaching landfills produce gases which are harmful for the environment. Developed countries have become aware of the environmental degradation caused by our careless consumerist approach.

The production of natural and synthetic textile materials use non-renewable energy resources. Throwing them away without proper utilization till the end of the life cycle is wastage of
natural resources. Developed economies are focusing on recycling technologies, products and application of recycled textiles. It is human responsibility to put the resource to use and keep them in product life cycle for extended period of time to avoid wastage.

Dumping of polymer as municipal solid waste in landfills is sheer depletion of natural resources. Fabric takes years to decompose and during the process it releases harmful gases and chemicals to pollute the earth and environment. There are many ways to recycle textile material which has 100% recyclable nature. They can be converted into reclaimed fibers and are further processed to recycled yarns and non-woven recyclable nature. They can be converted into reclaimed fibers and are further processed to recycled yarns and non-woven textiles. It is human responsibility to put the resource to use and keep them in product life cycle for extended period of time to avoid wastage.

Recycling of clothes is an age old tradition in India and all over the world. Various states have traditional method of converting the waste into useful household products. In Rajasthan the old clothes or fabrics are patched and quilted to makes bedcovers, bags and other items. In Bengal two or three old sarees or dhotis are quilted by hand using even or uneven running stitch in various forms and motif inspired from day to day activities to make Kanthas. Chindi is a term used in Gujarat for traditional weaving with old clothes which are cut in one to two inches strips. These strips are assembled and stitched together with crotchet hook and thread. These are mats or floor coverings are known as Chakhlo or Chindi rugs.

There is a little research done on Chindi products, its designs, researcher has to be practitioner also for making the products. Sikka (2013)[10].

The study is both experimental and conceptual in nature as researcher has to be practitioner also for making the products.
The process of converting the waste into useful raw material was taught to the group by the researcher through the module. Ten session of two hours duration were conducted by the researcher with the group. They were given input on segregating the waste as per colour schemes or colour combinations by the researcher as per module. Instructions on different methods of cutting the waste in 1” to 2 ½” width as per thickness of fabric were demonstrated by the researcher for making Chindi twinning balls.

Post test was given to them after development of second grade raw material and development of products by the researcher in their presence. Pre and post test analysis was done.

5. Method for developing second stage raw material for Chindi products

Step I: Instruction as per colour module

Instruction were given orally and by showing sheets made in the colour module to explain the colour (Fig. 1).

Step II: Collection of fabric waste

Around 36 kgs of fabric waste from 3 boutiques, making womens’ clothing was collected. The waste had fabric cutting of irregular size, shape and material. The boutiques owners confirm that it is of their no use and they throw it to garbage bin every weekend or after 10 days.

Step III: Segregation of waste

The bundle of waste was opened in the group. They were further paired and asked to collect one colour from the list of 11 basic colours as given by two American anthropologists Brent Berlin and Paul Kay. Varley (1980) [1]. The colours were Red, Orange, Yellow, Green, Blue, Violet, White, Black, Grey, Pink and Brown. They pulled and gathered fabric scrape of one specific colour. They were guided by the researcher to decide on the hue of the fabrics which were of varying saturation and value. While segregating waste as per colour it was realized that extreme White tints of Yellow, those named Cream or Pearl can be collected as separate pile. So the piles of fabrics were 12 in number finally with addition of Cream colour in the list of basic colours.

Step IV: Making second level raw material

Second stage raw material for Chindi product are i) Chindi twinning balls ii) Chindi braid balls iii) a continuous Chindi yarn balls iv) Chindi cut pieces of 1” to 2” width and 4” to 9” length.

Instruction were given orally as per module for Chindi twinning balls.

They were taught the technique for converting the waste to second stage raw material by practical demonstration, however module was made by researcher for personal use. The technique of cutting the strips and joining it was demonstrated. The Short listed colour combination for Chindi...
twinning balls were; Red and Green, Blue and Orange, Yellow and Purple, Black and Grey, Cream and Brown, White and Pink. The group was given fabric as per decided colours.

Fig 3: Making second level raw material

The second stage raw material was then weighed which came out to be 20 kgs. The leftover material was either heavy weight fabrics or fabrics with jaquard weave or soiled fabrics. Those fabrics were not suitable for making second stage raw material for Chindi products but could be used for other products.

Fig 4: Chindi twinnings and Chindi Braids

Step V: Making products for assessing the quality of second stage raw material made by group of women

The products were made by researcher to check the consistency of thickness, understanding of colour, amount of twist and braiding tension. The techniques used to make products were macramé knotting, pasting and zig zag sewing with pattern sewing machine. The products were of acceptable quality as per five fashion experts with further scope of improvement in use of colour while joining the pieces. The thickness of the stripes was also need to be controlled for better quality product.

Fig 5: Products with Chindi

6. Results and Discussions

62% of participants have family income between Rs 5,000-10,000 and 19% families earn less than Rs 5,000 per month (Fig.6). 69% participants are unmarried girls (Fig.7). 50% of sample is 10th pass and 44% is 10+2 qualified (Fig.8). 94% sample size lies in the age group of 15-24. The group has more number of students i.e. 56% who want to supplement family income by getting involved in part time activity (Fig.9).
6.1 Graphical Representation of Demographic background

**Family Income**

- Below 5000: 13%
- 5000-10,000: 6%
- 10,000-15,000: 19%
- 15,000-20,000: 62%

![Fig 6](image)

**Percentage of Professional Status**

- Self Employed: 25%
- Part Time Job: 0%
- Housewife: 19%
- Student: 56%

![Fig 9](image)

**Percentage of Marital Status**

- Married: 31%
- Unmarried: 69%
- Widow: 0%

![Fig 7](image)

**Age group of Participants**

- 15-24: 0%
- 25-34: 6%
- 35-44: 94%

![Fig 10](image)

6.2 Pre test and post test analysis

- Only 15% of the sample has seen the products made with left out pieces of textiles. The items include cushion covers, durries, mats and kids garments (Fig 10). Post test increased the percentage to 100% as products made with second stage raw material were show to them before the test.
- 30% of the sample has made products like kid’s garments or have helped their mother and grandmother in making durries with fabric strips (Fig 10).
For testing their knowledge on colour, they were asked about primary and secondary colours and if they have ever heard of any colour scheme. 65% of women have never heard of colour schemes and 35% have rarely used monochromatic colour schemes. Understanding of colour also improved drastically. 50% of them said that they use colour knowledge given to them during module frequently, however 50% choose rarely as option as they are still not confident in remembering the colour schemes.

The percentage on the agreement for devoting number of hours for craft activity increased from 10% to 40% for 03-04 hours per day and 35% to 60% for 2-3 hours per day. As they realize that they can perform these activities while watching television at home.

The expectation in terms of money also changed after getting skilled. None of the participant is interested in earning below Rs 100. 30% of them expect to earn Rs 300-400. 40% find Rs 200-300 would be reasonable amount in exchange of their labour.

The group was tested for their knowledge on handicrafts, handlooms and sewing machine handling. 58% of them know one or two handicraft techniques, 39% can handle sewing machine for simple stitching of household articles and few of that lot was skilled to make ladies suits and kids’ panty and frock.

7% agreed for knowing Chindi twinning and 43% said that they know Chindi braiding. The percentage of women knowing handicrafts especially, Chindi braiding and Chindi twinning increased to 100% after module.

The complete group find the method of developing second stage raw material for Chindi products satisfactory.

7. Conclusion
While segregating textile waste it was realized that cream colours in very low percentage in white which was not considered appropriate for yellow so separated pile was made for it because of amount of content in the waste. The group was enthusiastic to learn the skill of converting waste into braids and twinning balls as 100% sample wanted to involve in similar project for income generation though expectations in terms of money varied. The success of method adopted could be assessed by the agreement of the group for converting second lot of boutique waste to Chindi braid balls without any supervision. However they were asked to follow monochromatic colour scheme for making Chindi braid balls. They all find it very interesting activity as they can do it while watching television and during free time. The assessment of quality of the Chindi twinning balls was done after product formation. The length of material was almost homogeneous in thickness as similar thickness of fabric was cut with same width by all as instructed. The amount of money expected is only possible with the involvement of any government support to take the production and next level and by providing the support for marketing of products. The opportunities for forming new product range are abundant.

8. References


