



# **KHADI - A NEW CREATION WITH SCREEN PRINTING**

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**Abstract** : Khadi- The Fabric of Indian Independence is slowly disappearing and losing its charm in India if it were not for a few innovative designers who try to give it a new life. The present study is an effort to determine the acceptability of khadi fabric with screen printing on various articles to find out their acceptability, attractiveness and saleability.

In the current fashion era the lives of people are not aware regarding the use of khadi fabrics. The present study is an effort to determine the acceptability of khadi fabric with screen printing on various articles to find out their acceptability, attractiveness and sale ability. The research methodology included conducting pre- survey regarding this topic in some khadi Bhavan and by interacting with teen ager girl in different areas of Ahmedabad city and after that will draw 150 different designs were drawn and construct 30 garments and then survey was conducted for the for acceptability of product.

The objectives of the study are to achieve the following ....

- 1) To study the process carried out for screen printing.
- 2) To understand the market acceptability of khadi fabric with screen prints.
- 3) To draw 150 designs for khadi fabric on selected articles.
- 4) To construct 30 articles from khadi fabric with screen printing done over it.
- 5) To study the acceptability, attractive, saleability of samples prepared by khadi on screen printing.

**Key words:** Khadi, Screen printing,

## **I. INTRODUCTION**

Khadi or Khaddar is a term for handspun and hand-woven cloth from India, Bangladesh and Pakistan primarily made out of cotton. The raw materials may sometimes also include silk, or wool, which are all spun into yarn on a spinning wheel called a charkha. It is a versatile fabric, cool in summer and warm in winter. In order to improve the look, khādī/khaddar is sometimes starched to give it a stiffer feel. It is widely accepted in fashion circles.

### **Identification and analysis of problem**

Khadi is hand spun and hand woven cloth. Generally khadi is very rough less acceptable and has less variations. It is very simple fabric with less design and pattern on it. Gandhi began promoting the spinning of khadi for rural self-employment and self-reliance in 1920s India, thus making khadi an integral part and icon of the Swadeshi movement. The freedom struggle revolved around the use of khadi fabrics and the dumping of foreign-made clothes. Thus it symbolized the political ideas and independence itself, and to this day most politicians in India are seen only in khadi clothing. The khadi fabric is slowly disappearing in India if it were not for a few innovative designers who try to give it a new life. They come up with new colors and weaves.

## WHAT IS KHADI?

- Khadi is hand (home) spun and hand (home) woven cloth. It can be cotton, silk or wool. Khadi is the cloth- and home-industry that M. Gandhi during the independence-war, fiercely protected against the cheaper, imported cloth from England (the world's textile giant of the time and colonizer of India).
- “Mahatma Gandhi began promoting the spinning of khadi for rural self-employment and self-reliance in 1920s India, thus making khadi an integral part and icon of the Swadeshi movement. The freedom struggle revolved around the use of khadi fabrics and the dumping of foreign-made clothes. Thus it symbolized the political ideas and independence itself, and to this day most politicians in India are seen only in khadi clothing. The khadi fabric is slowly disappearing in India if it were not for a few innovative designers who try to give it a new life. They come up with new colors and weaves. Khadi can take on many different looks.”
- Our wrap skirts are made of khadi. The fabric becomes even more beautiful once you know the history and background of it. The weaving of khadi cloth, done in between formwork, often provides the so much needed extra little bit of income to the farmers.
- Khadi is woven in often rural areas where there is no electricity. Everything is done by hand. It explains the loss of fabric that can be as much as 20%. Often small stains, discoloring and even bird droppings can be found on the cloth ... before washing (all khadi products are washed and pre-shrunk) and sewing.
- The small weaving errors give it the particular khadi charm. Khadi has the unique property of keeping the wearer warm in winter as well as cool in summer. The more you wash it, the better it looks and feels. Khadi is more than fabric; it is a way of life. It stands for independence and for going back to basics.
- Our goal for the (near) future is to have khadi woven from ecologically grown cotton (cotton that grows without the use of pesticides, herbicides and defoliants).
- The world is becoming more ecologically and ethically aware. We know that for many textile communities in India the so much needed transformation from chemically grown cotton to organic & fairly traded cotton is just starting. House of Khadi wants to help these growers and communities achieve their goals.

## KHADI IN INDIA

- In India, Khadi is not just a cloth, it is a whole movement started by Mohandas Karamchand Gandhi. The Khadi movement promoted an ideology, an idea that Indians could be self-reliant on cotton and be free from the high priced goods and clothes which the British were selling to them.
- The British would buy cotton from India at cheap prices and export them to Britain where they were woven to make clothes. These clothes were then brought back to India to be sold at hefty prices. The Khadi movement aimed at boycotting foreign goods including cotton and promoting Indian goods, thereby improving India's economy.
- Mahatma Gandhi began promoting the spinning of khadi for rural self-employment and self-reliance (instead of using cloth manufactured industrially in Britain) in 1920s India thus making khadi an integral part and icon of the Swadeshi movement.
- The freedom struggle revolved around the use of khadi fabrics and the dumping of foreign-made clothes. When some people complained about the costliness of khadi to Mahatma Gandhi, he started wearing only dhoti.

## TYPES OF KHADI



### 1. COTTON KHADI AND POLYESTER

- The production of cotton Khadi is one of the major activities of the Board which creates employment opportunities for rural artisans. Under this sector, the major function is to produce Khadi of all varieties which involve the process of spinning, weaving, bleaching and dyeing, etc.,.

- There are about 204 Rural Textiles Centres, 80 sub-centres and 50 Nepali Loom Centers in addition to one Dyeing and Bleaching unit at Bhavanisagar. These units give employment to about 20,000 artisans; of which 12,500 are women-folk the major products produced from Khadi Cotton are various types of Dhotis, Shirting's, Towels, Bed sheets, Bedspread, Uniform cloth and other varieties. A target of Rs. 8 cores is fixed for production of Khadi and polyester varieties through the Board for the year 2002 - 2003.

## 2.KHADI SILK

- The Silk Industry is an old Industry. The silk sarees produced by the Board are unique with prices ranging from normal to maximum and having a good potential in the market. The Board has also introduced attractive staiduard and printed sarees which are gaining popularity among the customers. Continuous efforts are being made to change the colour, design including computer design of these sarees to meet the latest taste of the consumers. The Board is providing employment opportunities for about 1554 silk weavers throughout the year. Besides, the Board is also having its own Silk Twisting Centre and Dyeing Centre at Kattampatti exclusively for Silk. A target of Rs.27 cores is fixed for the production of Khadi silk for the year 2002-2003 through the Board.

## INTRODUCTION TO SCREEN PRINTING

Screen printing is a printing technique that uses a woven mesh to support an ink-blocking stencil to receive a desired image. The attached stencil forms open areas of mesh that transfer ink or other printable materials which can be pressed through the mesh as a sharp-edged image onto a substrate. A fill blade or squeegee is moved across the screen stencil, forcing or pumping ink through the mesh openings to wet the substrate during the squeegee stroke. Basically, it is the process of using a mesh-based stencil to apply ink onto a substrate, whether it is t-shirts, posters, stickers, vinyl, wood, or other material.

Screen printing is also a stencil method of print making in which a design is imposed on a screen of polyester or other fine mesh, with blank areas coated with an impermeable substance. Ink is forced into the mesh openings by the fill blade or squeegee and onto the printing surface during the squeegee stroke. As the screen rebounds away from the substrate the ink remains on the substrate. It is also known as silkscreen, serigraphy, and serigraph printing. One colour is printed at a time, so several screens can be used to produce a multicoloured image or design. Screen printing is used to print small runs of posters, display boards, fabrics, and wallpaper and control panels of electronic products.

## SCREEN PRINTING

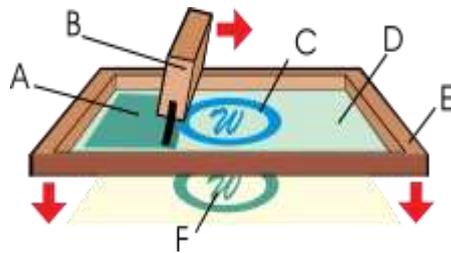
A stencil is placed under the screen and ink forced through the stencil onto the material below. Screen printing with stencils is best for blocks of the screen is made from a fine mesh material fixed to a wooden frame. colour

## MANUAL FLATBED SCREENPRINT PROCESS

1. Mesh is stapled to a wooden or metal frame
2. Masking tape stuck around underside of the screen
3. Stencil design cut
4. Stencil placed under frame but above paper
5. Line of ink placed at one end of screen
6. Use squeegee to draw ink across screen, pressing firmly
7. Carefully lift screen
8. Evaluate and repeat

## PRINTING TECHNIQUE

Screen Printers use a silkscreen like this Screen stretch version, a squeegee, and hinge clamps to screen print their designs. The ink is forced through the mesh using the rubber squeegee; the hinge clamps keep the screen in place for easy registration.



A .Ink. B. Squeegee. C. Image. D. Photo-emulsion. E. Screen. F. Printed image

The basic techniques used in screen printing are described as under:

### Cracking ink:

Cracking ink effect is when the ink produces an intentional cracked surface after drying.

### Discharge inks:

Discharge ink is used to print lighter colors onto dark background fabrics, they work by removing the dye of the garment – this means they leave a much softer texture. The cons with this process is that they are less graphic in nature than plastisol inks, and exact colors are difficult to control. One of the pros of using this process is they are especially good for distressed prints and under-basing on dark garments that are to be printed with additional layers of plastisol. It adds variety to the design or gives it that natural soft feel.

### Expanding ink (puff):

Expanding ink, or puff, is an additive to plastisol inks which raises the print off the garment, creating a 3D feel and look to the design. Mostly used when printing on apparel.

### Foil:

Foil is much like flock, but instead of a velvet touch and look it has a reflective/mirror look to it. Although foil is finished with a heat press process it needs the screen printing process in order to add the adhesive glue onto the material for the desired logo or design.

### Four colour process or the CMYK colour model:

Four colour process is when the artwork is created and then separated into four colors (CMYK) which combine to create the full spectrum of colors needed for photographic prints. This means a large number of colors can be simulated using only 4 screens, reducing costs, time, and set-up. The inks are required to blend and are more translucent, meaning a compromise with vibrancy of colour.

### Glitter/Shimmer:

Glitter or Shimmer ink is when metallic flakes become an additive in the ink base to create this sparkle effect. Usually available in gold or silver but can be mixed to make most colors.

### Gloss:

Gloss ink is when a clear base laid over previously printed inks to create a shiny finish.

### Metallic:

Metallic ink is similar to glitter, but smaller particles suspended in the ink. A glue is printed onto the fabric, then nano-scale fibers applied on it. This is often purchased already made.

### Plastisol:

Plastisol is the most common ink used in commercial garment decoration. Good colour opacity onto dark garments and clear graphic detail with, as the name suggests, a more plasticized texture. This print can be

made softer with special additives or heavier by adding extra layers of ink. Plastisol inks require heat (approx. 150 °C (300 °F) for many inks) to cure the print.

### Methodology:

The questionnaire was used for target group for different issues regarding what blocked prints are. Women were the target groups. Various types of questions are asked to assess the issues relating to their like or dislike for block prints, issues of cost, issues related to motifs etc. Researchers survey various parameters like cost; design, happiness to wear block print garments, which types of modification like layout of block, colors, motifs etc are required by them in block printed fabric by a set of questionnaire and personal interviews.

The survey was done by teenagers from different areas of Ahmadabad city from 150 designs, out of which 30 designs were selected.

In Project- II we constructed the garment categories where one-piece and kurtis. Western garments like pleated frock, T-shirts, shirt, shorts, halter neck frock etc were prepared.

In the current fashion era the lives of People are not aware regarding the use of khadi fabrics. So we have chosen the topic of using khadi fabrics in garments to prevent the present study is an effort to determine the acceptability of khadi fabric with screen printing on various articles to find out their acceptability, attractiveness and sale ability. At this time khadi fabric is also not much popular for embellish the garment so we chose this art.

Keeping the problem in mind we made garments from khadi fabrics and embellished it with screen printing.

### Result and Discussion:

Thirty garments were constructed and sixty teenager girls surveyed for know their opinion. Teenage girls gave their opinion for garments were discussed in this chapter From the questionnaire, the remarkable results are obtained.

## RESULT & DISCUSSION

**Table No. : 1**  
**Knowledge of the respondent about printing**

Respondent	Knowledge	
	Yes	No
60	85%	25%

Table no.1 showed all the respondents of teenage group were 85% percent selected respondents have knowledge of printing methods, but 15% respondents do not have that knowledge.

**Table No. : 2**  
**Color combination of the garments**

Respondent	Color combination			
	Excellent	Very good	good	poor
60	26.66%	51.66%	21.66%	0%

Table no.2 showed all the respondents of teenage group were 27% respondents found the color-combination to be excellent, 52% find it very good, & 22% find it good.

**Table No. : 3**  
**Pattern of the garments**

Respondent	Pattern			
	Excellent	Very good	good	poor
60	23.33%	50%	26.66%	0%

showed all the respondents of teenage group were 23% respondent find the pattern of the garment to be excellent, 50% find it to be very good, and 27% find it to be good.

**Table No. : 4**  
**Finishing of the garments**

Respondent	Finishing			
	Excellent	Very good	good	poor
60	20%	50%	30%	0%

Table no.4 showed all the respondents of teenage group were 20% of the respondents find the finishing of the garment to be excellent 50% find it to be very good & 30% find it to be very good.

**Table No. : 5**  
**The prices of the garments appropriate**

Respondent	Price appropriate or Not	
	Yes	No
60	80%	20%

Table no.5 showed all the respondents of teenage group were 80% of the respondent find that the prices of garment are appropriate & 20% find it to be inappropriate.

**Table No. : 6**  
**You feel about the wear ability of the garments**

Respondent	Garment wear ability			
	Excellent	Very good	good	poor
60	26.66%	38.33%	35%	0%

**Table No. : 7**  
**Like the materials used in the garments**

Respondent	Like the material	
	Yes	No
60	95%	5%

**Table No. : 8**  
**You feel about the durability of the garments**

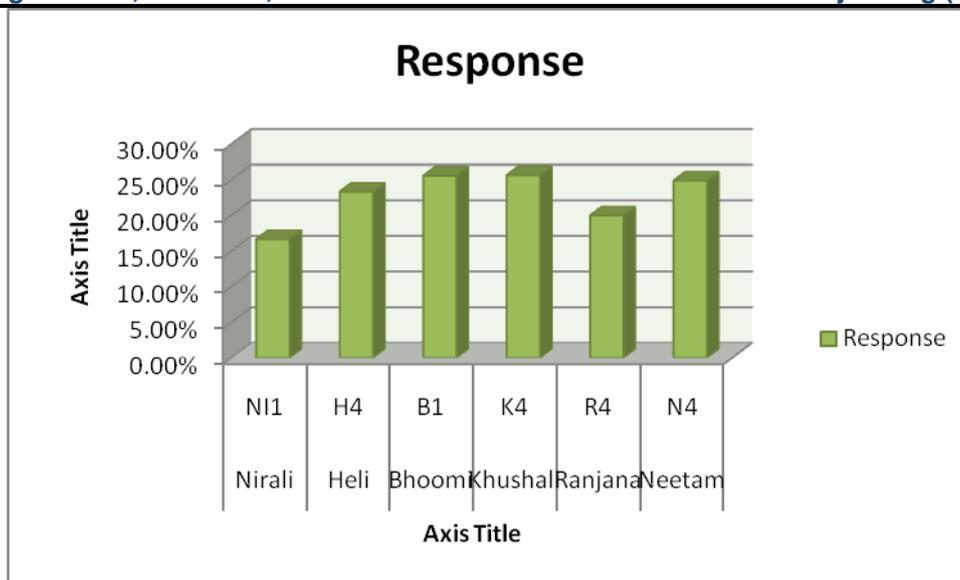
Respondent	Garments durable			
	Excellent	Very good	good	poor
60	23.33%	41.66%	35%	0%

**Table No. : 9**  
**According to you the best garment**

NI1	21.66%	H1	23.33%	B1	48.33%	R1	31.66%	K1	15%	N1	31.66%
NI2	30%	H2	33.33%	B2	11.66%	R2	15%	K2	20%	N2	25%
NI3	10%	H3	3.33%	B3	28.33%	R3	13.33%	K3	5%	N3	23.33%
NI4	11.66%	H4	33.33%	B4	6.66%	R4	33.33%	K4	43.33%	N4	18.33%
NI5	26.665	H5	6.66%	B5	5%	R5	6.66%	K5	16.66%	N5	1.66%

**Table No. : 10**  
**Among the six, choose the best garment**

Name	Nirali	Heli	Bhoomi	Khushali	Ranjana	Neetam
Garment No	NI1	H4	B1	K4	R4	N4
Response	16.66%	23.33%	25.55%	25.65%	20.00%	24.89%



**Table No. : 11**  
**Reason why it is best**

<b>A</b>	Print is good.	36.66%
<b>B</b>	Pattern is good.	25%
<b>C</b>	Stitching quality and style is good.	35%
<b>D</b>	Good aesthetic value.	3.33%

**Table No. : 12**  
**Like the most garment printing style**

NI1	16.66%	H1	25%	B1	30%	R1	21.66%	K1	13.33%	N1	28.33%
NI2	30%	H2	28.33%	B2	15%	R2	21.66%	K2	21.66%	N2	16.66%
NI3	8.33%	H3	10%	B3	25%	R3	16.66%	K3	16.66%	N3	16.66%
NI4	28.33%	H4	23.33%	B4	18.33%	R4	25%	K4	33.33%	N4	16.66%
NI5	16.66%	H5	11.66%	B5	8.33%	R5	13.33%	K5	15%	N5	3.33%

### SOLUTION OF THE PROBLEM

Khadi can take on many different looks. Khadi the hand woven fabric can be made attractive, acceptable and saleable by doing surface embellishment on it. Therefore, screen printing is done on it. By doing it we are promoting khadi fabric which will improve the living standard of weavers and make them self-reliance. It will also help in increasing the selling of khadi fabric and profit of merchandisers who are involved in marketing of khadi fabric.

Screen printing is the simplest method of printing. It requires little investment and can be done at small scale.

### Conclusion:

Screen printing is a method of transferring multiple copies of the same design to different surfaces. While the mediums and surfaces may vary, screen printing ink is one of the necessary materials needed to complete this process. The ink is allowed to pass through a special screen that has been covered with a stencil, essentially creating a negative-space design. There are two main types of ink for screen printing: water-based and plastisol. There are also several types of specialty inks that can be used to create various effects. When it comes to buying screen printing ink, buyers need to consider the compatibility with the surface, thickness, as well as solvent stability. Screen printing is still used today because it is inexpensive and quick, has a wide range of uses, and is very durable. When purchasing ink for screen printing, buyers should turn to eBay for the best possible choices and prices.

Labor Intensive Process: A labor has to work manually and all of the process of the hand screen printing is done by the hands. So it needs more time to produce a product.

Fastness Properties Are Average: As all of the process is done manually, the fastness properties of the printed fabric is not well.

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