



DEVELOPMENT OF CREATIVE FASHION GARMENT THROUGH APPLICATION OF NATURAL DYES BY KALAMKARI PAINTING ON SILK CROP TOPS

Kedar Mrunalini¹ and Mankar Varsha²

Dept of Fashion Design, L.A.D. & Smt. R.P. College for Women, Nagpur. (MS)

ABSTRACT

The present study was focused on the development of creative contemporary fashion garment through application of kalamkari painting on silk fabric, with natural dyes extracted from the barks of Banyan, Jackfruit and Sapota plants. Pre-mordanting was done with harda and alum. kalamkari painting was done with black vegetable dye i.e. kasim and the other dyes were extracted from the selected plants. Painted fabric was subjected to wash, rub, perspiration and light fastness properties. Designed and constructed crop tops were introduced to the panel of judges, to evaluate overall impact, in terms of awareness towards eco friendly dye, the shades obtained from natural dyes and application of value addition technique i.e. kalamkari painting

Keywords: - contemporary, mordanting, extraction, value addition, kalamkari.

1. Introduction

World today is becoming more and more conscious towards ecology and environment. Synthetic (azo) dyes are suspected to release harmful chemicals that are allergic, carcinogenic and detrimental to human health and environment. There is greater need to revive the tradition of natural dyes, dyeing and printing techniques, as an alternative of synthetic dyes. Natural dyes are nontoxic and do not create environmental problems due to their bio-degradable nature. Demand of natural dyes is increasing continuously as their production and application does not require strong acids and alkalis, many natural dyes have anti allergic properties. The major advantage is that they are non mutagenic, colours are soothing to human eyes too.

Now a day's people are turning away from hazardous chemical dyes, textile and fashion artists believe in using natural dyes for dyeing, printing and painting. The present study focused on the dyes and shades developed from barks of jackfruit, banyan and sapota plants Colours obtained were applied on silk crop tops with the help of traditional method of kalamkari painting. According to Ashish Kumar Samanta et al. (2007)¹, Purohit et al. (2009)², the waste leaves of (Jack fruits) give different shades on silk and cotton yarns, M. Kumaresan et al. (2012)³, examined silk fabric with stem of sapota, and all opined that all three plants can be used as good dye source and investigated that the application of dye on textile is an economical and easy to handle and helps economic growth.

As per the Mahendra Singh Chaudhary et al. (2012)⁴ and Sidhu and Jasten Kaur Grewal (2008)⁵ study, from Alum and copper sulphate observed different shades of pink on silk and

evaluated for colour fastness to washing, rubbing perspiration and light giving fair to excellent fastness grades. As per the Phukon study silk yarn together with pre-mordanting, simultaneous mordanting and post-mordanting with alum and copper sulphate and Fastness assessed showed that alum and pre-mordanting method gave the best result, with good colourfastness.

Dr. A.Deshmukh and Sharda Dongre (2015)⁷ experimented and suggest the kalamkari as a best value addition technique to fashion and in eco-friendly clothing. According to Sankar Roy Maulik and Khashbu Agarwal (2014)⁸ that products worked with natural dyes can be worth as labeled as eco- friendly textiles, hand painted fabric has the potential for giving a crafty look to various handloom fabrics used for apparel and home furnishing purpose. In fact, it can also be used for embellishing finished garments such as t-shirt, jackets, etc. as also many other products like bags, pillow and cushion cover.

In the present study barks of banyan, jackfruit and sapota plants were used as a dye sources, the dyed and kalamkari painted silk samples were subjected to wash, rub, perspiration and light fastness properties and designed and constructed garment was introduced to panel of judges for overall impact in terms of colours obtained from dye sources, application of traditional kalamkari painting with bold designs to the contemporary fashion garment i.e. crop top.

2. Objectives :

The objectives of the study are:

- i. To study the natural (vegetable) dyeing.
- ii. To study the shades obtained from selected plants.

- iii. To enhance the aesthetic value of silk by kalamkari painting.
- iv. To assess the fastness properties of painted silk.
- v. To develop a fashion garment through (Kalamkari) painting
- vi. To develop entrepreneur skills by developing fashion garment with natural dyes

3. Materials and Methods

3.1 Material :

- Mulberry silk was used for study
- Barks of banyan, jackfruit and sapota plants were used as a dye source
- Harda fruit and alum were used for pre-mordanting

3.2 Experimental Methods :

- Silk fabric was prepared prior to dyeing and printing by de-gumming

3.3 Preparation of colour for painting :

- Black colour was prepared by traditional method of fermentation of jiggery and iron, in mud pot with water.
- Other colors were obtained from the aqueous extraction of barks of selected plants.

3.4 kalamkari painting on silk

- Harda treatment and milk treatment were given to silk fabric.
- Selected designs were outlined with black kasim and filled with the dyes extracted from the dye sources.
- Shade dried.
- Steaming of painted silk was carried out for colourfixation .
- Painted samples were washed thoroughly and shade dried.

4. Assessment of Fastness Properties

- Painted silk fabrics were assed towards washing, rubbing, and perspiration and light fastness properties.

5. Designing of Crop-Tops

- Crop tops were constructed with selected mordant and dyes

5.1 Evaluation of crop tops

- Evaluation was done by young girls and panel of judges towards. Awareness of eco- friendly dyes.
- Traditional technique i.e. kalalamkari painting as value addition technique.
- Soothing color shades.
- Overall impact of all i.e. fabric, dye source, colour obtained mordants and bold design.

6. Result and Discussion

Table1: Alum + AS, FB and AH (Kalamkari).

1	Color fastness to washing Change in colour Staining in cotton / silk	4 4-5/4-5
2	Color fastness to perspiration Acidic – change in colour Staining in cotton / silk Alkaline – Change in color Staining on cotton / silk	4 4-5/4 4 4-5/4
3	Color fastness to rubbing Dry (Warp / Weft)	3/3
4	Color Fastness to light Blue wool rating	4-5

As per the table : alum mordanted and dye from any of the plants sources used Kalamkari painted sample rates good (4) to color change and rates good to excellent (4-5) for staining on adjacent fabric while tested for color fastness to washing. Sample rates good (4) in color change for acidic as well as alkaline medium also rates good to excellent (4-5) for both acidic and alkaline medium for color fastness to perspiration. Sample rates fair (3) for dry rubbing and its fastness to light rating is good to excellent (4-5).

Table2: Preferences of respondents for colour mordant with Alum

Sr. No.	Colour mordant	Mean	SD	Rank of Preferences
1	Alum + Jackfruit	2.43	0.73	I
2	Alum + Banyan	2.37	0.56	II

3	Alum + Sapota	1.2	0.48	III
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The choice of mordant was also essential for study. The above table shows the preferences of the respondents among the tops, three dyes in combination with Alum as a mordant. From above table mostly preferred jackfruit colour with mordant Alum. And the combination of Alum with banyan was ranked second and with sapota was ranked third.

Graph 1: Preferences for color mordanted with alum.

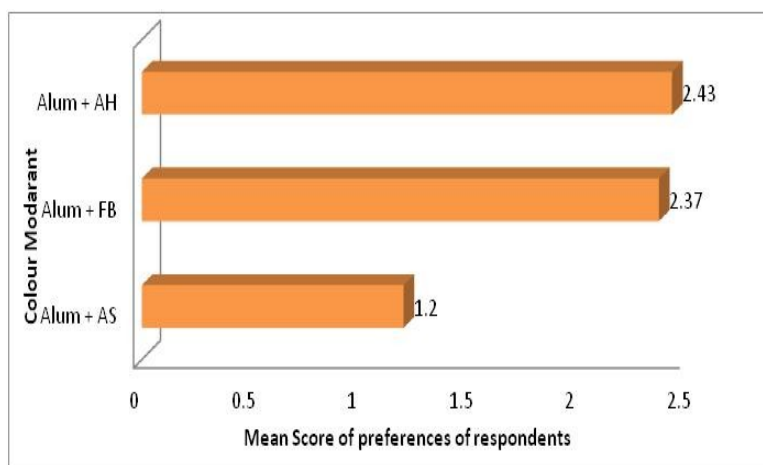


Table 3: Responses of respondents about overall impact of all aspects i.e.-dyes, colour, design and fashion garments

Sr. No.	Plants	Mean	SD	Rank of Preferences
1	Sapota	3.8	0.92	III
2	Banyan	4.07	1.48	II
3	Jackfruit	5.43	0.90	I

As the study encompasses a wide range of aspects like the impact of dyes, design on the garment as well as the fashion and style, so it was essential to gauge the overall preferences of the respondents especially the young generations. A typical trend was seen which showed that first preference was given to AH plant for all aspects, followed closely by FB and AS at second and third place.

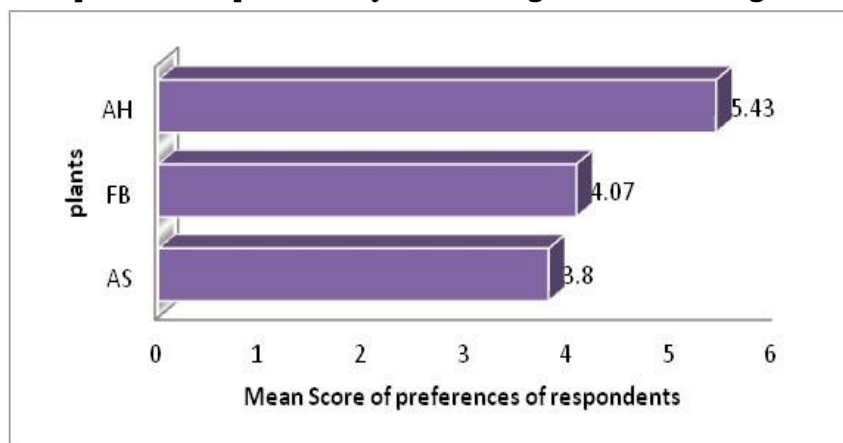


Crop top with Jackfruit

Crop top with Sapota

Crop top with Banyan

Graph 2: Overall impact of all aspects i.e.-dyed and designed and fashion garment



1. Conclusion

From the present study it can be concluded that the developed creative fashion garment i.e. crop tops were accepted in all aspects by this new generation. Dyes extracted from the selected samples exhibited fair to good for wash, perspiration, rub as well as light fastness too. Kalamkari painted Fashion garments were evaluated for awareness towards eco-, skin friendly natural dyes which yield soothing colours, which rated remarkably high. And liking for traditional value addition technique i.e. kalamkari painting which rated very good to excellent choice with contemporary garments too. Therefore the study suggests, the use of dyes extracted from barks of banyan, jackfruit and sapota, as a very good option for the ranges of vivid and soothing shades and kalamkari painting with

these dyes can be used as value addition technique to contemporary fashion garment. It can be a completely new concept to develop New Era's fashion garments with traditional technique and with an age old traditional natural dyes. And also helps to develop an entrepreneurial skill in fashion industry and proved as an asset to human being. "GO GREEN"

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