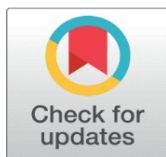


DESIGNING OF FOOTWEAR THROUGH ART OF CHAMBA RUMAL

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ABSTRACT

Chamba Rumal is generally used as a square mal-mal (muslin) cloth coverlet embroidered with colourful silken threads. The birds, human and animal's motifs were used to develop the Chamba Rumal footwears. The Chamba Rumal is interesting embroidery which reflects the social and religious life of the people in a particular region. For the present study, Chamba Rumal motifs were collected and selected by the researcher herself with the help of guide in the first phase of the study. Then 25 design sheets were prepared with the most preferred motifs. The developed design sheets were scrutinized by 100 respondents. Out of these, five designs sheets were selected by ranking method. Then, these were developed into prototypes. After development of prototypes, assessment was done by 5-point rating scale. It was observed that majority of the respondents accepted the newly developed products and rated the prototypes from average to excellent. Also, the respondents were ready to buy the products at the estimated cost. Thus, it was concluded that designing of footwear through art of Chamba Rumal embroidery is a successful innovation in the field of textile and fashion industry.

Keywords: Chamba Rumal, Design, Footwear, Innovation, Craft

1. INTRODUCTION

Designing is one of the most important aspects of the fashion world. In fact, everything revolves around design. The word 'DESIGN' is often considered as an imagination and perception of the people which can vary from person to person [Wilson \(2001\)](#). Designing is the idea of selecting, organising, and putting thoughts in a particular sequence, as well as the material aspect of our own reality. Designing is the process of shifting from a state of randomness to a higher level of organisation in order to convey a key message or to make a desired impression. Designing is, at

its ultimate degree, the meticulous and expert manipulation of an artistic element [Sharma \(2015\)](#).

Once the human race began to cloth himself, this creative urge was so strong that it was not sufficient to make a protective covering for body. To satisfy this urge for decorative fabrics and clothing so as to break the monotony of design, various techniques of decoration were developed [Shenai \(1974\)](#).

The Indian subcontinent has a very old history with embroidery. The earliest known Indian needles date to around 2000 BC and were discovered at Mohenjo Daro, which is now in Pakistan. Their very existence indicates an ancient tradition of sewing, which opens up the possibility to embroidery [Crill \(1999\)](#).

The rumals were traditionally embroidered with untwisted silk thread coloured in natural colours on unbleached hand-spun muslin. The embroidery style known as do-rukha uses the double satin stitch the most commonly [DCC. \(2017\)](#).

As the space on both sides of the fabric is filled up during stitching, the pattern on both sides seems equally effective and similar in content. This method is known as "dorukha," which means "two-faced " [Dey \(2017\)](#). But these coverlets were also embroidered using the single satin stitch, darn stitch, cross stitch, buttonhole stitch, and chain stitch [Pathak \(2010\)](#).

The once-princely hill republics of Chamba, Kangra, Basholi, and neighbouring states, which are now a part of Himachal Pradesh, are where the chamba rumal embroidered art form developed and flourished [Rai \(2008\)](#).

The Persian word "rumal" indicates handkerchief. However, Chamba Rumal refers to the needlework work done on a hand-spun khaddar or a beautiful muslin cloth that is cut into squares [InDG. \(2023\)](#).

The earliest instances of this type of embroidery may be found in the 16th century, when Bibi Nanki, Guru Nanak's sister, is credited with creating them. These pieces are unique because of the importance of the subject matter, not because of their beauty. Dorukha, the double satin stitch used on the fabric is exquisite to the touch and to the eye on both sides [Jaffer \(2006\)](#). This embroidery is thought to have been influenced by Pahari (Hill) miniature paintings since it has a distinct shape [Naik \(2012\)](#).

Traditional Chamba Rumal motifs includes two dancing women which are depicted encircling a plantain tree. The embroidery technique is said to be as a sort of painting on cloth that depicts various subjects using a needle and thread. Themes that are frequently shown include scenes from Indian mythology, the Ramayana, the Mahabharata, Ras Lila, Krishna Lila, Pahari paintings, hunting scenes, wedding scenes, and dice games. The Rumal's most well-known subject was Rasamandal, but other popular subjects include hunting, Nayika Bhed, the Shiva clan, and the Mahabharata. Like in the paintings, the "Krishna Lila" is a well-liked theme. Skillfully stitched designs on fabric include a wide range of geometric and floral patterns, as well as representations of battles, structures, and hunting experiences. Raslila in an old depiction in Chamba rumal. In the central section, deities are depicted, especially Lord Vishnu in all of his forms. There were other images of trees, birds, animals, and people. Bird themes include the parrot, peacock, duck, and swan, among others. Among the animal motifs are tigers and leaping horses. Among the tree motifs are the cypress and plantain trees, which are twisted and overflowing with blossoms and fruits to signify fertility [Sharma \(2022\)](#).

The embroidery craft in Chamba was largely relied on one of the locals' social rituals. The evolution of the craft was kept in an absolutely beautiful shape and to a

high level of perfection. In Chamba, people from all social groups contributed to the creation of these rumals [Arora \(2017\)](#).

Traditionally, the two types of unbleached cotton cloth that were employed as the base fabric were the first being the transparent, light-weight, fine-grained, cambric-like fabric made in Sialkot, Amritsar, and Ludhiana. The second type of khadder is coarser, somewhat heavier, and hand-spun and hand-woven [Naik \(2012\)](#).

Footwear design is the study of applying design aesthesis and appealing production to footwear in day-by-day life. Footwear is an essential part of clothing. Footwear design as a whole means a particular study regarding the presentation of building footwear in a more attracted manner. The U.S. state of Oregon's Fort Rock Cave is where archaeologists found the oldest pair of shoes ever found. These sandals, which were made from sagebrush bark, have been radio carbon dated to at least 10,000 B.C. These are evidence which show that the history of the shoes in 10,000 B.C. that is at the end of the Paleolithic from the wild to protect their feet from the harsh environment [Jeremy \(2004\)](#).

Anatomical changes that may have been brought on by wearing shoes serve as the foundation for earlier shoe use evidence. According to Erik Trinkaus, wearing shoes causes physical changes in the toes, and these changes can be seen in human feet as early as the Middle Paleolithic. In essence, Trinkaus contends that "localised mechanical insulation from ground response stresses during heel-off and toe-off" is implied by small, gracile middle proximal phalanges (toes) compared with more robust lower limbs [Hirst \(2019\)](#). The historical setting reveals how footwear evolved from being a simple commodity to signifying an identity, attitude, and way of life. India, a country of artisans, is well known for its ancient skill in making footwear. Traditional footwear manufactured by regional artisans includes leather chappals in Kohlapur, embroidered Juttis in Jodhpur, Indo-Tibetan felt boots in Sikkim, and vegetable fibre shoes in Ladakh, to name just a few. In recent years, the traditional shoe and boot industries have clearly embraced technology, which has greatly benefited both shoemakers and shoe wearers. India is a nation that is incredibly diversified, India is a very diverse country, and this diversity is reflected in the variety of traditional footwear styles that can be found there. Through maintaining and increasing their export contribution in relation to the development of clustering and many other similar activities, small and medium-sized businesses in India can significantly contribute to the growth and progress of the footwear sector.

In the context of fashion industry, the footwear development provides a significant role in promoting business. It is responsibility of footwear designer to develop original and artistic footwear ideas. Footwear is not simply need; but it is a fashion statement.

In order to promote the industry and boost capacity, MSME have developed as the nurseries of entrepreneurship by establishing incentives for drawing international investments through footwear units. The emergence of Footwear Park complexes has changed the current situation by establishing new, modernized production centers in addition to the already established production centers in Uttar Pradesh, Tamilnadu and Andhra Pradesh.

Moreover, the Ministry of MSME is implementing many programmes to enhance industry capacity and provide capital subsidies. Because footwear has always played a crucial role in completing any fashion trend that comes by, whether it is professional, semi-formal, or casual, the main advantage of a career in the footwear industry is that it is non-seasonal and always changing [Sahoo \(2019\)](#).

A major factor in the development of the leather and footwear industries and the creation of opportunities for their growth and promotion on a global scale has been the "Indian Footwear, Leather & Accessory Development Plan," a central government programme. Anything from flats, sandals, and stilettos to boots and athletic wear rule the roost as beautiful fashion statements in today's ultra-fashion-conscious culture. The Department for Promotion of Industry and Internal Trade (DPIIT) and the Footwear Design & Development Institute (FDDI) are working together to carry out the Primary Skill Development Programme (PSDP) as part of the XIIIth Five Year Plan of the Government of India.

The training sessions were held in a number of operators training facilities around the nation, including those in Agra, Kanpur, Bareilly, Delhi/NCR, Kolkata, Ranipet, Chandigarh, Maharashtra, Bihar, and other locations. More than 180 centers/sub-centers were also constructed in outlying areas to give the training program at the doorstep of unemployed youngsters. The training programme were also conducted at venues provided by factory owners, shoe groups, and other on-site locations [FDDI. \(2017\)](#).

Chamba rumal implies a peculiar visual art form that represents unique and charming embroidery done on a hand spun cloth with untwisted silken thread which is greatly inspired by Pahari paintings. So, this inspiration was used as a tool to give a contemporize look to field of footwear designing. The linguistic craft of the chamba rumal have fascinated the world. The present work of craft of chamba rumal through footwear development will reflect the immense creativity of ordinary people and their quest for self-expression. It is an initiative towards overall progress of craft. The reason for focusing on this is that these artisans of chamba rumal churn their masterpieces with their hands but fail to find visibility they deserve. A large number of artisans have moved over the years to urban centers seeking low paying and unskilled employment. Therefore, this work was done to promote the skills and knowledge of traditional craft of chamba rumal through footwear designing. A contemporized effort for bringing something new in fashion industry.

The development of footwear design can also give opportunity of branding project which can be used to give visibility to this beautiful community. It will also bridge gap between makers and buyers. The motifs of chamba rumal will make a new path for consumer on this beautiful journey of crafts and craftsmen. One of the most important components of fashion is footwear. Without a pair of contemporary shoes, clothing and fashions are incomplete. The development of footwear design will fulfill the need of new product in market for consumer. Thenceforth the present study was planned with following objectives:

1.1. OBJECTIVES

- 1) To survey the market to get an insight for the present trend of footwears
- 2) To assess the consumer preferences for designing footwear
- 3) To collect and select motifs of Chamba Rumal embroidery
- 4) To develop and select design sheets with most preferred motifs
- 5) To develop prototypes with selected design sheets
- 6) To check the acceptability and marketability of the footwears

1.2. DELIMITATIONS

- The study was de-limited to 100 respondents

- The study was de- limited to development of 5 footwears
- Only cotton fabric was used

2. METHODOLOGY

The methodological approach to carry out this study was broadly classified under the following subheads:

- 1) Locale of the study
- 2) Selection of the respondents
- 3) Tools and procedure for data collection
- 4) Analysis of data

The study's methodology has been divided into 5 phases in order attain its specific objectives:

Phase 1

- The place of the study is the place where the study was carried out. The study was conducted out in Banasthali Vidyapith, Rajasthan.
- For the study, 100 respondents were selected for taking consumer preferences for the footwears to be developed.

Phase II

Various data and Chamba Rupal motifs were collected from different sources like published journal, articles, books, magazine and e- sources.

The motifs were scrutinized for designing of sheets. 25 design sheets were sketched with the most preferred motifs.

Phase III

In the third phase, the respondents selected 5 design sheets for the creation of footwear design on a 5-point rating scale. They included five faculty members of clothing and textile department and 25 postgraduate students. The rating system was set up so that the design with the greatest score was considered to be the best or most preferred.

Phase IV

In 4th phase, the design of footwear through Chama Rupal embroidery were developed using selected designs.

Phase V

In 5th phase, development of prototypes was done. Then assessment was done by 100 respondents based on criteria i.e design, colour, overall aesthetic appeal was done, fineness of work. Five-point rating scale was used for assessment of prototypes.

Then consumer's acceptability and market value of the designed footwear were determined.

3. RESULTS AND DISCUSSION

The results of the study were divided into following subsection:

- Consumer preferences and market survey.
- Assessment of consumer acceptability for design sheets
- Assessment of consumer acceptability and marketability for the developed product

3.1. CONSUMER PREFERENCES AND MARKET SURVEY

The market survey reveals that 95% people were aware of traditional embroidery and 65% respondents also know about the Chamba Rumal motifs. 52% preferred the cotton fabric for the development of footwear. The 58% respondents preferred cotton thread embroidery with 2 colour threads. 67% people liked to wear the Chamba Rumal footwear for casual wear.

3.2. ASSESSMENT OF CONSUMER ACCEPTABILITY FOR DESIGN SHEETS

On the basis of respondent preferences, 25 Chamba Rumal design were developed. Chamba Rumal embroidery was used for surface enrichment. In this study, subjective analysis was used as a tool to analyze the designs. 100 respondents were chosen to judge the design visually and ranks were given on the basis of different parameters, design, aesthetic appeal, color combination. Finally, best 5 design sheets 4, 7,10,12,23 were selected on the basis of highest weighted mean score.

Table 1

| Table 1 Preferences of Developed Design Sheets for Prototypes | | | |
|---|---------------------|---------------|------|
| S. No | Design sheet no. | Weighted Mean | Rank |
| 1 | Design sheet no. 1 | 3.83 | 17 |
| 2 | Design sheet no.2 | 4.29 | 12 |
| 3 | Design sheet no.3 | 3.2 | 25 |
| 4 | Design sheet no. 4 | 4.44 | 5 |
| 5 | Design sheet no. 5 | 3.79 | 18 |
| 6 | Design sheet no. 6 | 4.40 | 6 |
| 7 | Design sheet no. 7 | 4.79 | 2 |
| 8 | Design sheet no. 8 | 4.22 | 13 |
| 9 | Design sheet no. 9 | 4.10 | 14 |
| 10 | Design sheet no. 10 | 4.89 | 1 |
| 11 | Design sheet no. 11 | 3.37 | 24 |
| 12 | Design sheet no. 12 | 4.75 | 3 |
| 13 | Design sheet no. 13 | 4.37 | 9 |
| 14 | Design sheet no. 14 | 3.63 | 20 |
| 15 | Design sheet no. 15 | 4.39 | 8 |
| 16 | Design sheet no. 16 | 4.33 | 11 |
| 17 | Design sheet no. 17 | 3.43 | 22 |
| 18 | Design sheet no. 18 | 4.42 | 7 |
| 19 | Design sheet no. 19 | 3.39 | 23 |
| 20 | Design sheet no. 20 | 3.68 | 19 |
| 21 | Design sheet no. 21 | 4.34 | 10 |
| 22 | Design sheet no. 22 | 3.61 | 21 |

| | | | |
|----|---------------------|------|----|
| 23 | Design sheet no. 23 | 4.59 | 4 |
| 24 | Design sheet no. 24 | 4.1 | 15 |
| 25 | Design sheet no. 25 | 3.87 | 16 |

Figure 1

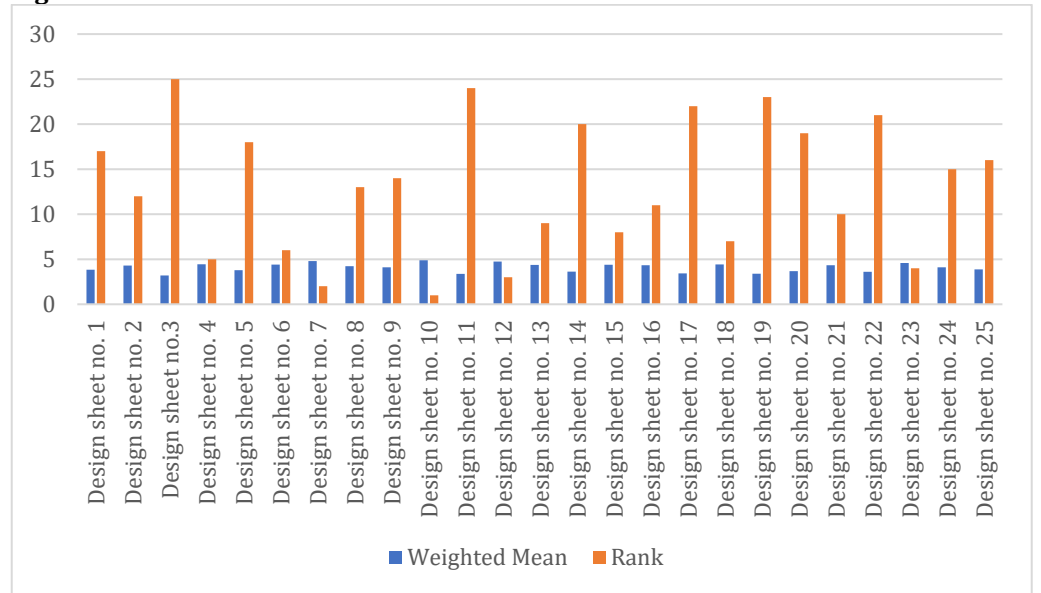


Figure 1 Preferences of Developed Design Sheets for Prototypes

Table 2

Table 2 Most Preferred Design Sheet for Product Development

| S. No. | Design No. | Weighted Mean Score |
|--------|------------|---------------------|
| 1 | 10 | 4.89 |
| 2 | 7 | 4.79 |
| 3 | 12 | 4.75 |
| 4 | 23 | 4.59 |
| 5 | 4 | 4.44 |

Figure 2



Figure 2 Developed Product Through Chamba Rupal

3.3. ASSESSMENT OF CONSUMER ACCEPTABILITY AND MARKETABILITY FOR DEVELOPED PRODUCT

Table 3

| Table 3 Comparative Analysis for Prototypes of Placement of Motif | | | | | | |
|---|---------------|-----------|-----------|------|---------|------|
| S. No | Design no. | Excellent | Very good | Good | Average | Fair |
| 1 | Design no. 10 | 55 | 30 | 15 | - | - |
| 2 | Design no. 7 | 53 | 28 | 19 | - | - |
| 3 | Design no. 12 | 45 | 35 | 20 | - | - |
| 4 | Design no. 23 | 30 | 35 | 35 | - | - |
| 5 | Design no. 4 | 20 | 25 | 35 | 20 | - |

The [Table 3](#) shows that the majority of the respondents graded all designs from average to excellent for the selected design.

In case of design no. 10,7,12 and 23 100% respondents rated it from good to excellent. And for design no. 5 (100%) respondents rated it from average to excellent.

Table 4

| Table 4 Comparative Analysis for Prototypes of Uniqueness of Design | | | | | | |
|---|---------------|-----------|-----------|------|---------|------|
| S. No | Design no. | Excellent | Very good | Good | Average | Fair |
| 1 | Design no. 10 | 45 | 35 | 25 | - | - |
| 2 | Design no. 7 | 40 | 30 | 30 | - | - |
| 3 | Design no. 12 | 43 | 33 | 24 | - | - |
| 4 | Design no. 23 | 20 | 35 | 45 | - | - |
| 5 | Design no. 4 | 17 | 23 | 25 | 35 | - |

The [Table 4](#) depicts that majority of the respondents graded the designs from average to excellent.

In case of uniqueness for design no. 10,7,12 and 23 100% respondents rated it from good to excellent.

And for design no. 4 (100%) respondents rated it from average to excellent.

Table 5

| Table 5 Comparative Analysis for Prototypes for Fineness of Work | | | | | | |
|--|---------------|-----------|-----------|------|---------|------|
| S. No | Design no. | Excellent | Very good | Good | Average | Fair |
| 1 | Design no. 10 | 48 | 32 | 20 | - | - |
| 2 | Design no. 7 | 40 | 35 | 25 | - | - |
| 3 | Design no. 12 | 40 | 30 | 30 | - | - |
| 4 | Design no. 23 | 23 | 19 | 38 | 20 | - |
| 5 | Design no. 4 | 16 | 25 | 35 | 24 | - |

The [Table 5](#) revealed that majority of the respondents graded all the designs from average to excellent.

In case of fineness, design no. 10,7,12 (100%) respondents rated it for good to excellent and in case of design no. 23, 4 100% respondents rated it from average to excellent.

Table 6**Table 6 Comparative Analysis for Prototypes for Overall Appeal**

| S. No | Design no. | Excellent | Very good | Good | Average | Fair |
|-------|---------------|-----------|-----------|------|---------|------|
| 1 | Design no. 10 | 57 | 43 | - | - | - |
| 2 | Design no. 7 | 37 | 43 | 20 | - | - |
| 3 | Design no. 12 | 45 | 33 | 22 | - | - |
| 4 | Design no. 23 | 22 | 28 | 25 | 25 | - |
| 5 | Design no. 4 | 22 | 18 | 34 | 26 | - |

The [Table 6](#) depicts that majority of the respondents graded all the designs from average to excellent. In case of overall appeal of design no. 10 (100%) respondents rated it very good to excellent and in case of design no. 7,12 (100%) respondents rated it good to excellent and in case of design no. 23, 4 (100%) rated it from average to excellent.

Table 7**Table 7 Comparative Analysis for Prototypes for Colour Combination**

| S. No | Design no. | Excellent | Very good | Good | Average | Fair |
|-------|---------------|-----------|-----------|------|---------|------|
| 1 | Design no. 10 | 40 | 35 | 25 | - | - |
| 2 | Design no. 7 | 58 | 33 | 9 | - | - |
| 3 | Design no. 12 | 48 | 19 | 33 | - | - |
| 4 | Design no. 23 | 35 | 25 | 20 | 20 | - |
| 5 | Design no. 4 | 22 | 24 | 32 | 22 | - |

The [Table 7](#) shows that majority of the respondents graded all the designs from average to excellent.

In case of colour combination for design no. 10, 7, 12 (100%) respondents rated it from good to excellent and in case of design no. 23,4 (100%) respondents rated it from average to excellent.

Table 8**Table 8 Response in Percentage for Willingness to Pay the Estimated Cost**

| Design No. | Cost | Yes | No |
|------------|------|-----|-----|
| 10 | 292 | 90% | 10% |
| 7 | 275 | 88% | 12% |
| 12 | 280 | 93% | 7% |
| 23 | 262 | 88% | 12% |
| 4 | 253 | 75% | 25% |

It was revealed that maximum no of respondents were ready to pay the estimated cost for the prototypes.

4. CONCLUSION

It was concluded that all the novel designs of footwears were accepted by all the respondents. They rated the designs from average to excellent. Thus, by making small changes in our traditional crafts of Chamba Rumal, something new can be created which will break the monotony in field of footwear designing. At the same time, it will give recognition and employability to craftsmens by keeping our feet on traditional grounds.

CONFLICT OF INTERESTS

None.

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