



# Simulation of Textile Designs from *Durrie* Motifs for Varied Applications

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**ABSTRACT:** *India is a diverse country with varied cultures, art forms and traditions. These bring richness to the living, life and lifestyle. The textile handicrafts of the country imbibe rich history, aesthetics and exquisite designs, which are reflected through their varied designing. Taking inspiration from durrie motifs the present study was conducted on adaptation of durrie motifs for development of innovative designs. 146 traditional durrie motifs were collected from various secondary sources. The identified motifs were sketched manually and scanned from books, magazines etc. which were further recreated and modified in CorelDRAW X5 and Adobe Photoshop softwares to get the required complexity and elegance. The selected motifs were categorized in three categories viz. geometrical, floral and animals & birds motifs and five top preferred motifs from each category were selected for development of designs. The motifs selected for design development were motif number 24 (WMS 2.66), 26 (WMS 2.60), 2 (WMS 2.50), 5 (WMS 2.46) and 6 (WMS 2.33) in geometrical motif category, motif number 7 (WMS 2.83), 9 (WMS 2.63), 30 (WMS 2.43), 14 (WMS 2.36) and 21 (WMS 2.33) in floral motifs category, in animal & bird motifs category the selected motifs were motif number 7 (WMS 2.73), 15 (WMS 2.50), 2 (WMS 2.43), 1 (WMS 2.26) and 30 (WMS 2.23). Total forty five designs were prepared using selected fifteen motifs and fifteen top preferred designs were selected for varied application.*

**Keywords:** *Durrie, Handicraft, Motif, Design, CorelDRAW*



## INTRODUCTION

The traditions of Indian arts and crafts are the oldest and diverse in the world. India had always been known as the land that portrayed cultural and traditional vibrancy through its conventional arts and crafts. They represent a unique and continuous ethos and aesthetic sensibility right through thousands of years that has been a remarkable ability to assimilate, remake, re-shape the incoming styles, ideas, artists and techniques and yet retain the core essence. The rich history of India's craft tradition has evolved over the centuries offering a legacy of Indian culture promising everything- beauty, dignity, form and style. Many crafts has evolved in modern times into new products using the same craft practices and are finding new expressions to suit contemporary needs. The folk art and the traditional ideas that are the glitter of our culture, when applied on textile by a commercial aspect is gaining popularity.

India is known for its rich cultural heritage, intricate and exquisite traditional designs, welcoming hues and manifestation of regional diversity in textiles. The rich craft heritage of India is as unique and diverse as its customs and traditions. Each part of the country has its own unique cultural ethos which is manifested in the crafts of that particular region.

*Durrie* weaving is one of the most popular traditional craft of Haryana. *Punja* durries are familiar objects in almost every household in the villages of Haryana and is mainly practiced as a leisure time activity by women. The craft gets its name from a metallic claw-like tool called *Punja* in the local dialect, used to beat and set the filling threads. Mostly these are woven in bright colours with floral, geometric, bird and animal motifs are especially attractive and are used on floors, beds and *diwan* (Yadav and Rose, 2019). In Haryana, most crafts and traditional motifs have not evolved into art forms and have remained in their original use, very ethnic and simple, and yet colorful and vibrant enough to express state's rich heritage. A continuous stream of art traditions has survived at all the times in Haryana and it has some beautiful traditional motifs used in handicrafts and their art work including handloom, woven furniture, artistic pottery, wood carving, etc. The motifs of flowers, animals, birds and geometrical designs are used to decorate articles of rural use and personal clothing.

Folk art is a priceless treasure and each art and craft form has its own beauty which apparently has great potential in the international market because of its traditional aesthetic sensibility and authenticity. The rich motifs and designs of the traditional arts and crafts can be readily adapted into contemporary forms with an attempt to make them suitable to incorporate into textile products. Adapting traditional



motifs to contemporary use will be an innovative mode of showcasing the uniqueness of Haryana art form. This will not only help to preserve the Indian cultural heritage but will also broaden the design base for textile products.

## METHODOLOGY

The present study was conducted in the Department of Textile and Apparel Designing, I.C. College of Home Science, CCS Haryana Agricultural University, Hisar.

**Collection of Motifs:** A total of one hundred forty six traditional *durrie* motifs were collected personally by taking photographs of *durrie* and various secondary sources like books, journals, encyclopedia, magazines, web sites etc were also explored. All the collected motifs were analyzed critically and on the basis of their suitability to develop innovative designs, 90 motifs were screened and were classified as geometrical, floral, animals and birds motifs.

**Selection of Motifs:** In order to know the preferences regarding collected *durrie* motifs preferential choice index was developed. The collected motifs were shown to a panel of thirty experts and their opinions were sought on three point continuum scale i.e. highly preferred, preferred and least preferred. Weighted mean scores were calculated and ranks were assigned on the basis of weighted mean scores. On the basis of their ranks, the top preferred five motifs from each category were finalized for further work.

**Development of Designs:** The selected fifteen motifs were used for creation of innovative contemporary designs. The simulation of motifs was done with the help of CorelDRAW X5 using various software tools for enlargement/reduction of size, transformation, modification, rotation, editing until an aesthetically pleasing and required arrangement of motifs was obtained. A total of forty five designs were developed from the selected fifteen motifs using two to four motifs as per their compatibility and harmony.

**Selection of designs:** A preferential choice index was prepared and used for selection of designs. Individual score of each created design was calculated as weighted mean scores. Ranks were assigned according to their weighted mean scores and out of forty five developed designs most preferred one design of each motif was selected, hence a total of fifteen designs were selected for contemporary application.



## RESULTS AND DISCUSSION

**Collection of Motifs:** one hundred forty six traditional *durrie* motifs were collected personally by taking photographs and secondary sources of data like books, journals and internet and categorized into three categories i.e. geometrical, floral and animals & birds motifs. The collected motifs were refined/ recreated in Corel DRAW X5 to get the required intricacy and fineness.

**Selection of Motifs:** The collected motifs were shown to thirty experts for selections of motifs for design development. The results obtained are presented in Table 1 to 3 and selected motifs are shown in Plate-1. The selected motifs were recreated in corelDRAW X5 software and are presented in Plate-2.

The data presented in Table 1 reveal that as per experts' preferences motif number 24 scored highest weighted mean score 2.66, ranked I in geometrical motif category, followed by motif number 26 (WMS 2.60) ranked II, motif number 2 (WMS 2.50) ranked III, motif number 5 (WMS 2.46) ranked IV and motif number 6 (WMS 2.33) ranked V.

**Table 1: Preferences of experts for geometrical motifs** n=30

Geometrical Motifs					
Sr. No.	WMS	Rank	Sr. No.	WMS	Rank
1	2.13	XV	16	2.13	XV
<b>2</b>	<b>2.50</b>	<b>III</b>	17	2.13	XV
3	2.10	XIX	18	2.06	XXI
4	2.03	XXIV	19	2.16	XII
<b>5</b>	<b>2.46</b>	<b>IV</b>	20	2.06	XXI
<b>6</b>	<b>2.33</b>	<b>V</b>	21	2.00	XXVII
7	2.16	XII	22	1.83	XXX
8	2.26	VIII	23	2.26	VIII
9	2.30	VI	<b>24</b>	<b>2.66</b>	<b>I</b>
10	2.30	VI	25	1.93	XXIX
11	2.23	X	<b>26</b>	<b>2.60</b>	<b>II</b>
12	2.23	X	27	2.00	XXVII
13	2.16	XII	28	2.13	XV
14	2.03	XXIV	29	2.03	XXIV
15	2.06	XXI	30	2.10	XIX

WMS- Weighted Mean Score

The data pertaining to preferences of experts for floral motifs depicted in Table 2 envisage that motif number 7 was ranked I scoring WMS 2.83 followed by motif number 9 (WMS 2.63) ranked II, motif number 30 (WMS 2.43) ranked III, motif number 14 (WMS 2.36) ranked IV and motif number 21 (WMS 2.33) ranked V.



**Table 2: Preferences of experts for floral motifs**

**n=30**

Floral Motifs					
Sr. No.	WMS	Rank	Sr. No.	WMS	Rank
1	2.06	XI	16	2.03	XV
2	2.06	XI	17	1.73	XXVII
3	1.56	XXX	18	2.23	VIII
4	1.90	XXII	19	1.63	XXIX
5	2.00	XVII	20	1.93	XIX
6	2.06	XI	21	2.33	V
7	2.83	I	22	1.90	XXII
8	1.93	XIX	23	1.90	XXII
9	2.63	II	24	2.30	VI
10	1.96	XVIII	25	2.26	VII
11	1.73	XXVII	26	1.83	XXVI
12	2.03	XV	27	2.20	X
13	2.06	XI	28	2.23	VIII
14	2.36	IV	29	1.93	XIX
15	1.86	XXV	30	2.43	III

WMS- Weighted Mean Score

The data pertaining to preferences of experts for animal and bird motifs incorporated in Table 3 show that motif number 7 scored highest weighted mean score 2.73, ranked I followed by motif number 15 (WMS 2.50) ranked II, motif number 2 (WMS 2.43) ranked III, motif number 1 (WMS 2.26) ranked IV and motif number 30 (WMS 2.23) ranked V.

**Table 3: Preferences of experts for animal and bird motifs**

**n=30**

Animal and Bird Motifs					
Sr. No.	WMS	Rank	Sr. No.	WMS	Rank
1	2.26	IV	16	2.00	XVII
2	2.43	III	17	2.10	XIII
3	2.20	VI	18	2.06	XV
4	1.63	XXX	19	1.86	XIX
5	1.86	XXIV	20	1.86	XIX
6	1.86	XXIV	21	1.96	XVIII
7	2.73	I	22	2.10	XIII
8	2.20	VI	23	2.16	IX
9	2.20	VI	24	1.96	XVII
10	2.13	XII	25	1.93	XX
11	1.83	XXVI	26	2.16	IX



12	1.93	XXI	27	2.03	XVI
13	1.83	XXVI	28	1.83	XXVI
14	2.16	IX	29	1.93	XXI
<b>15</b>	<b>2.50</b>	<b>II</b>	<b>30</b>	<b>2.23</b>	<b>V</b>

WMS- Weighted Mean Score

### Selected Motifs

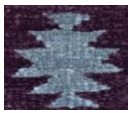














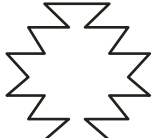
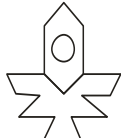
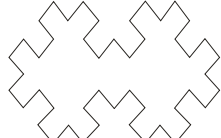


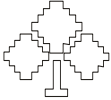



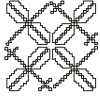
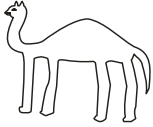
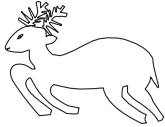
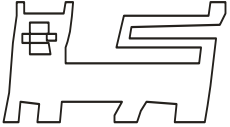


Geometrical Motifs				
				
<b>G24</b>	<b>G26</b>	<b>G2</b>	<b>G5</b>	<b>G6</b>
Floral Motifs				
				
<b>F7</b>	<b>F9</b>	<b>F30</b>	<b>F14</b>	<b>F21</b>
Animal and Bird Motifs				
				
<b>AB7</b>	<b>AB15</b>	<b>AB2</b>	<b>AB1</b>	<b>AB30</b>

Plate-1

### Recreated Motifs

Geometrical Motifs				
				
<b>G24</b>	<b>G26</b>	<b>G2</b>	<b>G5</b>	<b>G6</b>


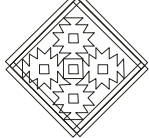
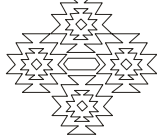
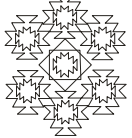

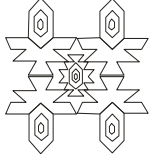
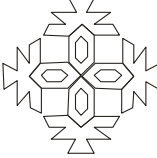
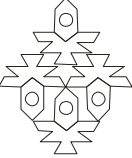
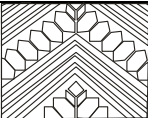
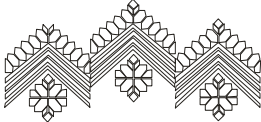
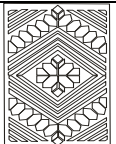



Floral Motifs				
 <b>F7</b>	 <b>F9</b>	 <b>F30</b>	 <b>F14</b>	 <b>F21</b>
Animal and Bird Motifs				
 <b>AB7</b>	 <b>AB15</b>	 <b>AB2</b>	 <b>AB1</b>	 <b>AB30</b>


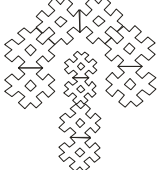
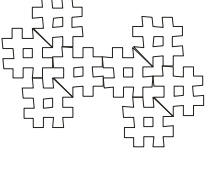
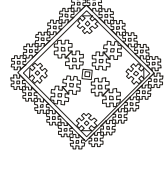



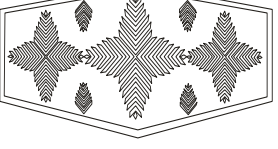
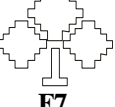
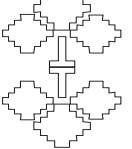
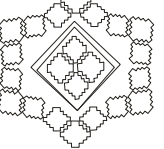
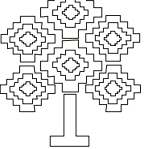



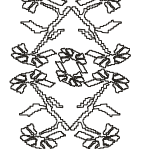



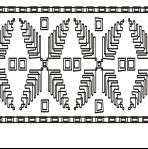
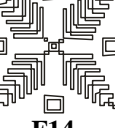

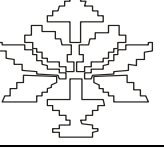
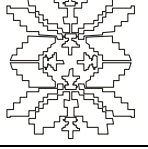


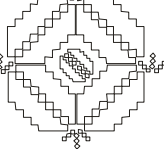
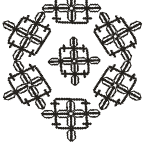




**Plate-2**

**Development of Designs:** The selected fifteen motifs were combined in systematic manner using CorelDRAW X5 software and a total 45 designs were developed. All the developed designs are presented in Plate-3. As per the preferences of experts top ranked one design of each motif was selected for varied applications through different embellishment techniques.

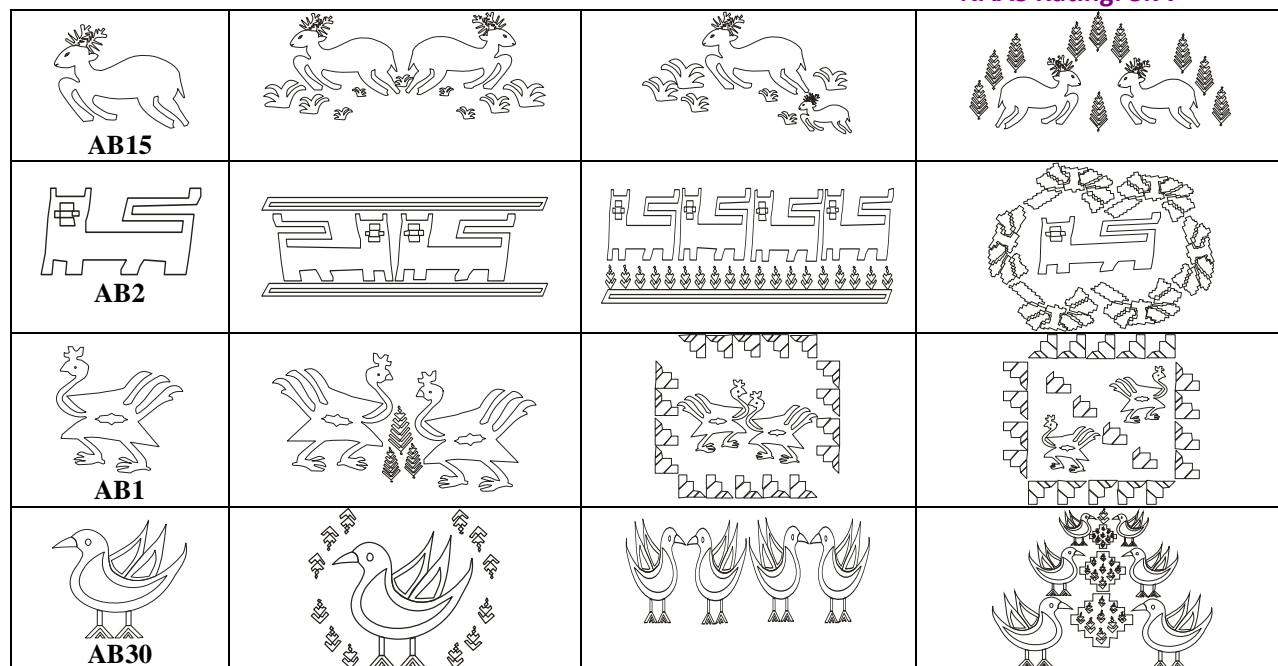
### Developed Designs

1. Geometrical Designs			
Motifs	Design No. 1	Design No. 2	Design No. 3
 <b>G24</b>			
 <b>G26</b>			
 <b>G2</b>			



 <b>G5</b>			
 <b>G6</b>			
<b>2. Floral Designs</b>			
 <b>F7</b>			
 <b>F9</b>			
 <b>F30</b>			
 <b>F14</b>			
 <b>F21</b>			
<b>3. Animal and Bird Designs</b>			
 <b>AB7</b>			










**Plate-3**

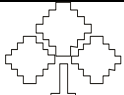
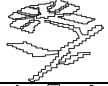


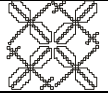
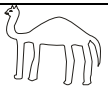




**Selection of Designs:** All the developed designs were visually evaluated by thirty experts and their preferences were obtained for selection of designs for contemporary applications (Table-4).

**Table 4: Preferential choice of experts for developed designs**

**n=30**

Motif	Preferences of Designs (WMS)			
	Design No. 1	Design No. 2	Design No. 3	
<b>1. Geometrical Designs</b>				
<b>G24</b>		2.10	2.13	1.73
<b>G26</b>		2.00	1.90	2.10
<b>G2</b>		1.93	1.80	2.26
<b>G5</b>		2.27	1.87	1.90
<b>G6</b>		2.26	2.13	1.60



<b>2. Floral Designs</b>				
<b>F7</b>		<b>2.00</b>	1.73	1.66
<b>F9</b>		1.83	<b>2.10</b>	2.06
<b>F30</b>		1.96	<b>2.20</b>	1.83
<b>F14</b>		1.93	1.90	<b>2.16</b>
<b>F21</b>		1.83	<b>2.46</b>	1.70
<b>3. Animal and Bird Designs</b>				
<b>AB7</b>		<b>2.03</b>	2.00	1.76
<b>AB15</b>		<b>2.46</b>	1.43	2.10
<b>AB2</b>		1.73	<b>2.30</b>	2.06
<b>AB1</b>		1.90	<b>2.10</b>	2.06
<b>AB30</b>		2.10	<b>2.20</b>	1.70

The data highlighted that as per the preferences of experts, amongst the designs developed using geometrical motif number 5, design 2 was highly preferred (WMS 2.13). Amongst the designs of motif number 26, design 3 was highly preferred scoring weighted mean score 2.10. Design 3 of motif number 2 scored highest weighted mean score 2.26. Amongst the designs developed with motif number 5 and 6, design 1 scored highest weighted mean score i.e. 2.27 and 2.26, respectively. Hence, the highly preferred designs of each motif were selected for placement on different articles (Table 4).

The data revealed that amongst the designs of floral motif number 7, design 1 scored highest weighted mean score 2.00. Amongst the designs developed using floral motif number nine, thirty and twenty one, design 2 was highly preferred scoring weighted mean score 2.10, 2.20 and 2.46, respectively. Amongst the designs of motif number fourteen, design 3 scored



highest weighted mean score 2.16. The highly preferred designs of each motif were selected for placement on articles.

The data in Table 4 showed that amongst the designs developed using motif number seven and fifteen, design 2 scored highest weighted mean score 2.03 and 2.46, respectively. Design 2 of motif number two, one and thirty was highly preferred scoring weighted mean score 2.30, 2.10 and 2.20, respectively. The highly preferred designs of each motif were selected for placement on different articles.

#### Selected Designs

Geometrical Designs				
Floral Designs				
Animal and Bird Designs				

Plate- 4

Hence, a total of fifteen designs were selected for development of placements for different articles (Plate-4). **Angelova and Mladenova (2016)** also adapted traditional carpet motifs of Bulgaria for development of textile articles viz. chair cover, pillow cover, wall panel, ethno bag, glass pad, jacket, etc. The results highlighted that the motifs can be used for production of fashion items, which will help in opening new market niches. The traditional carpet motifs can add value to many unified textiles items of today, fostering at the same time the world spreading of the traditional Bulgarian crafts. **Sunita (2016)** adapted traditional motifs of Haryana for development of digital embroidered products. The identified motifs were categorized in five categories viz. geometrical, floral and foliage, animal and bird, human and religious motifs. A total of sixty designs, twenty for each category of products i.e. apparel, home textiles and utility articles were developed using selected motifs. The design placements and



colour ways of selected designs were simulated with the help of CAD software. **Pant and Gahlot (2013)** adapted *Aipan* motifs for development of designs for ready to use borders. The five best designs were selected on the basis of their weighted mean score and ready to use borders were prepared through screen printing technique.

## CONCLUSION

It is thus concluded that the traditional *durrie* motifs of Haryana have endless possibilities for combining artistically to create unique designs for application on apparels, home textiles and utility articles. can be easily and artistically recreated to develop designs for different articles using surface enrichment techniques to satisfy the urge of high- end consumers as well as designers own need of creating something new and creative. *Durrie* motifs. use of CAD has helped in creating new and complex designs using *durrie* motifs and reduced the time involved in the entire process of textile designing. The

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