



Empowering Hill Women through Promotion of AIPAN Designs' Based Textile Articles

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ABSTRACT

Uttarakhand is known for its natural scenic beauty rendered by Himalayas, Tarai and Bhabar region and it has attracted everyone from all over the world. *Aipan* is a folk art of *Kumaun* region of Uttarakhand which is related to Hindu myths and rituals drawn on the floor. In the present study, *Aipan* designs were incorporated into borders woven through extra weft figuring technique using woollen yarn. These were then applied on products namely, lady's shirt, waist coat for male, waist coat for female, cap and stole. These finished articles were assessed by the two groups of respondents comprising of 30 *Kumauni* women and 30 females from of the College of Home Science on the parameters namely, workmanship of woven border, suitability of the border colour combination to that of fabric colour of the article, suitability of the border to the articles, placement of border on article, neat finishing of the article with applied border, overall appearance of the article. The waist coat for males and females finished with the borders, were widely accepted by the two groups of respondents and most of the respondents were satisfied with cost of articles. Thus, woven borders can be used effectively for the product diversification and could be promoted as means for conservation of *Aipan* craft in form of textile items.

Key words: Aipan design, Woollen yarn, Weaving, Textile Products

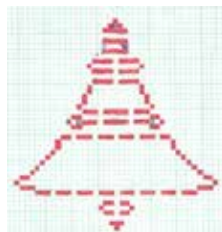
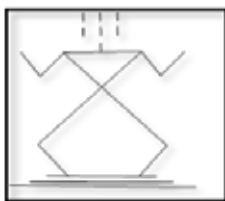
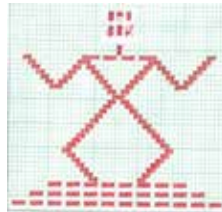
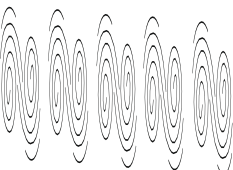
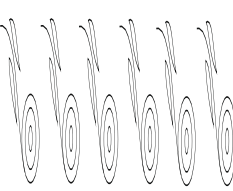
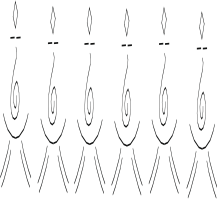
INTRODUCTION

Indian arts and crafts had been and still are representative of day-to-day lifestyle of people, socio-political conditions, palaces and court scenes. Indian arts and crafts of each age echo the culture, traditions and technology of a particular time period (Kumari, 2013). The folk paintings of different parts in India have distinctive features and reflect culture of specific regions inspired from the local customs and traditions. The rich cultural heritage of Uttarakhand has been kept alive through the arts and crafts. Temple architecture, wood carvings, traditional ornaments, rugs, carpets, baskets, copper utensils and the folk art *Aipan* are some examples of these crafts which have a unique touch of nature in their designs (UttaraPedia, 2014). *Aipan* is one of the traditional forms of *Rangoli* practiced in

Kumaun region, Uttarakhand. It is a decorative art form used extensively to decorate floors and walls at the places of worship and entrance of homes. *Aipan* are used as ritual designs for worships, festivals and ceremonies connected with birth, marriage and death. Efforts had been made continuously from a decade to explore possibility of preserving *Aipan* in form of textile for its conservation in future. The *Aipan* designs had been adapted to apply on to textile through weaving (Sangama and Rani, 2012; Kumari, 2013; Arya *et al*, 2017), tie and dye (Negi *et al*, 2017), screen printing (Arya *et al*, 2012; Arya *et al*, 2011), embroidery (Singh *et al*, 2013) and applique (Negi *et al*, 2015; Negi and Rani, 2016).

Being a Himalayan state, the climate of Uttarakhand is mostly cold in the hill region; hence,

Table 1. Graphs for the *Aipan* designs used in borders.

Name of design	Selected design	Adapted design	Graphical representation
Ghanti			
Nata			
Ghirol 1			
Ghirol 2			
Sua			

the clothing of the state is mostly woollen. The borders were woven with wool yarn to make them compatible to variety of woollen products used by local people due to cold climate in the hill region of the state. In the present study ready to use woven woollen borders were applied on traditional (ladies coat, gents waist coat) and contemporary dresses (ladies shirt) and accessories (cap and stole) used in winters. The woven borders applied on woollen

products would help to create distinct range of products for winter wear. Furthermore, these efforts would ensure the cultural development of the Uttarakhand state.

MATERIALS AND METHODS

Planning the articles

The articles planned for application of woven borders included ladies' shirt, gent's waist coat,

ladies' waist coat, cap and stole. Among these articles, waist coat for males, waist coat for females and cap were the traditional clothing items used by men and women in *Kumaun* region of Uttarakhand whereas ladies' shirt and stole represented the conventional clothing items used in daily life by adult females of all age groups.

Collection of raw materials

The borders were prepared with woollen and acrylic yarns. These yarns were chosen so that the borders would have more suitability for application on either woollen fabric or fabrics having texture of wool *i.e.*, blends and acrylic fabric. This would help in bringing out range of woollen articles finished with borders to fulfil demand of local people of hill areas of the state. Hence, the blends and woollen material demanded by consumers for winter clothing were chosen for construction of planned articles.

Weaving the borders

Five *Aipan* designs of selected border patterns namely, *ghanti*, *nata*, *ghiroli 1*, *ghiroli 2*, and *sua* were converted into graphic forms for weaving them into the borders using extra yarn figuring technique (Table 1). The background of the border had 2 x 2 right hand twill weave. The weaving was done on handloom using four harness and reed density 2 per cent.

Stitching of Articles and their finishing

The woven borders were applied onto the planned articles according to the suitability of borders to them. These borders were applied to the articles at different parts and direction.

Assessment of Prepared Articles for Consumer Acceptability

The stitched and finished articles were finally got assessed to establish their acceptability among consumers.

Table 2. Border arrangements in different combinations

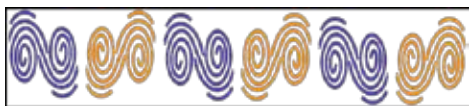
Design Name	Border Arrangement	Coloured Border arrangement
<i>Ghanti</i>	P_{1a1}	
<i>Nata</i>	P_{1a1}	
<i>Ghiroli 1</i>	P_{m11}	
<i>Ghiroli 2</i>	P_{111}	
<i>Sua</i>	P_{m11}	

Table 3. Details related to articles and parts where the borders were applied

Border arrangement	Article	Place where border was applied on the article
P _{Ial} (<i>Ghanti</i>)	Ladies shirt	Neck yoke, sleeve hem
P _{Iil} (<i>Ghiroli 2</i>)	Waist coat for males	Shoulder to waist line
P _{Ial} (<i>Nata</i>)	Waist coat for females	Waist hem
P _{mil} (<i>Ghiroli 1</i>)	Cap	Flap of cap
P _{mil} (<i>Sua</i>)	Stole	6" above hem

Note: The text in parenthesis indicates the name of Aipan design used in the border

Selection of respondents

Two types of respondents were selected in present study. The group I comprised of 30

Kumauni women in age group 45 to 55 yr. They were selected purposively as they were residents of *Kumaun* region of Uttarakhand and well versed with the *Kumauni* tradition and culture. It was considered that as they had good knowledge of *Aipan* designs, they would be able to assess the prepared articles with the *Aipan* designs borders. The group II consisted of 30 females including the faculty members, M.Sc. and Ph.D. students from Department of Clothing and Textiles and Department of Family Resource Management, College of Home Science, G. B. P. U. A. & T., Pantnagar. They were also selected purposively being related to field of design and product development

Assessment of consumer acceptability

The prepared articles were assessed on five point rating scale on the given parameters namely, workmanship of woven border, suitability of the border colour combination to that of fabric colour of the article, suitability of the border to the articles, placement of border on article, neat finishing of the article with applied border, overall appearance of the article.

RESULTS AND DISCUSSION

Application of Borders on selected Articles and their Finishing

The data (Table 2) show the different border arrangement prepared using different *Aipan* designs

in selected colour schemes. The borders were woven on handloom using the extra weft figuring technique of weaving. These woven borders were applied on to the planned articles namely, ladies' shirt, waist coat for males, waist coat for females, cap and stole. Table 3 represents information related to woven borders, articles and place where the borders were applied. The finished articles are shown in the Plates 1 to 5.

RESULTS AND DISCUSSION

Estimation of Cost for the Prepared Articles

The raw material cost and production charges for weaving of borders and construction of articles were calculated and final cost calculation of products was done. Table 4 shows the cost incurred in the preparation of articles finished with woven borders. The calculated cost of finished ladies shirt, waist coat for male, waist coat for female, cap and stole were . 548/-, . 1823/-, . 1593/-, . 443/- and . 263/-, respectively. The calculated cost was more for the waist coat for males and waist coat for females as they are the tailored garments. These two articles needed diverse inputs as the supporting materials for their structural finishing and hence craftsmanship charges for construction made the total cost high as compared to other articles.

Assessment of Prepared Articles for Consumer Acceptability

The results obtained from the assessment were given in Tables 5 and 6. Both the group accepted the articles well on different parameters.

Table 4. Cost incurred in preparation of the articles finished with woven borders.

Sl. No.	Parameters	Cost of articles finished with woven borders (In ₹)				
		Ladies shirt	Waist coat for male	Waist coat for female	Cap	Stole
A.	Weaving the borders					
1.	Raw material					
2.	Yarns used in background woven fabric	15	15	15	15	15
3.	Yarn used for figuring of the borders	3	3	3	3	3
4.	Craftsmanship charges for weaving of the borders	125	500	250	250	125
5.	Sub-total	143	518	268	268	143
B.	Construction of articles					
6.	Raw material					
7.	Fabric	250	300	300	80	60
8.	Lining	-	70	70	20	-
9.	Interfacing	-	60	60	-	-
10.	Piping	-	-	-	25	10
11.	Lace	15	-	10	-	-
12.	Button	-	5	15	-	-
13.	Craftsmanship charges for construction of the articles	140	870	870	50	50
14.	Sub-total	405	1305	1325	175	120
15.	Total Cost	548	1823	1593	443	263

The respondents of group I rated all the articles acceptable as depicted by weighted mean score (WMS) above 2.50 *i.e.*, the mid value of WMS. The highest rated parameter was neat finishing of the article with applied border in case of waistcoat (men) (WMS 4.80) while it was least rated parameter in case of stole (WMS 3.26). Both waistcoat for men and women, got WMS above 4.00 for all the parameters which represented high acceptability of traditional wear item among Kumauni women in its new version.

It can be envisaged from Table 6 that the respondents of group II also rated all the articles acceptable as depicted by weighted mean score (WMS) above 2.50 *i.e.*, the mid value of WMS.

The highest rated parameter was suitability of the border colour combination to that of fabric colour of the article in case of waistcoat (men) (WMS 4.80) while the least rated parameter was workmanship of woven border in case of stole (WMS 3.10). Both waistcoat for men and women, were highly acceptable items on all the parameters (WMS above 4.00). This further showcased that faculty members, M.Sc. and Ph.D. students of college of Home Science found traditional wear item of state distinctive through application of borders and hence considered good enough for use in present times.

Empowering Hill Women through Promotion of AIPAN



Plate 1. Waistcoat (Ladies) finished



Plate 2. Waistcoat (Men) finished



Plate 3. Ladies shirt finished with border



Plate 4. Stole finished with border



Plate 5. Cap finished with border

Table 5. Average weighted mean scores for different articles and different parameters (Group I-women of Kumaun region).

Parameters	Weighted mean score					Average of weighted mean score
	Border finished articles					
	Ladies shirt	Waist coat for males	Waist coat for females	Cap	Stole	
Workmanship of woven border	4.16	4.66	4.30	4.16	3.50	4.15
Suitability of the border colour combination to that of fabric colour of the article	4.13	4.53	4.46	3.96	3.43	4.10
Suitability of the border to the articles	4.13	4.50	4.53	3.96	3.36	4.09
Placement of border on article	3.96	4.13	4.16	3.93	3.36	3.90
Neat finishing of the article with applied border	4.40	4.80	4.63	3.93	3.26	4.20
Overall appearance of the article	4.46	4.16	4.70	3.96	3.53	4.10
Average of weighted mean score	4.20	4.46	4.46	3.98	3.40	

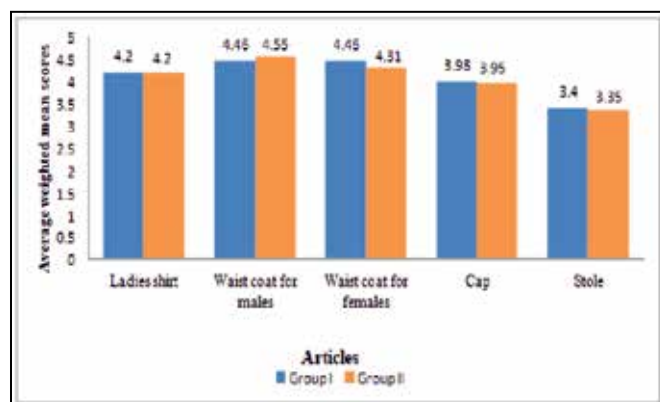


Figure 1. Comparison between preference of respondents (group I and group II) for border finished articles

Figure 1 shows that weighted mean score for waist coat for males (Group I-WMS 4.46, Group II-WMS 4.55) was maximum on acceptability measures (parameters) followed by waist coat for females (Group I-WMS 4.46, Group II-WMS 4.31) and ladies shirt (Group I-WMS 4.20, Group II-WMS 4.20). The weighted mean scores for cap (Group I-WMS 3.98, Group II-WMS 3.95) and stole (Group I-WMS 3.40, Group II-WMS 3.35) were lower in acceptability measures. Therefore it can be concluded that the respondents of two groups had similar preferences as they rated the articles in similar order.

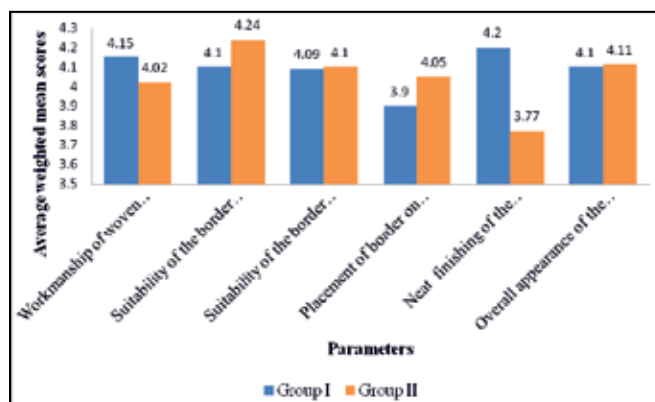


Figure 2. Comparison between preference of respondents (group I and group II) for different parameters used in assessment

The comparison among different parameters has been reported irrespective of articles being assessed i.e., on basis of average of weighted mean scores for different articles on a parameter. It is clear from Figure 2 that the respondents of group I rated the prepared articles better on neat finishing of the article with applied border (WMS 4.20) than other parameters. It was followed by workmanship of woven border (WMS 4.15), suitability of the border colour combination to that of fabric colour of the article (WMS 4.10), overall appearance of articles (4.10) and suitability of the border to the

Table 6. Average weighted mean scores for different articles and different parameters (Group II- Faculty members, M.Sc. and Ph.D. students).

Parameter	Weighted mean score					Average of weighted mean score
	Border finished articles					
	Ladies shirt	Waist coat for males	Waist coat for females	Cap	Stole	
Workmanship of woven border	3.96	4.46	4.56	4.03	3.10	4.02
Suitability of the border colour combination to that of fabric colour of the article	4.50	4.80	4.16	4.16	3.40	4.24
Suitability of the border to the articles	4.46	4.50	4.03	3.96	3.56	4.10
Placement of border on article	4.16	4.50	4.30	4.03	3.26	4.05
Neat finishing of the article with applied border	4.13	4.53	3.36	3.43	3.40	3.77
Overall appearance of the article	4.03	4.53	4.46	4.13	3.43	4.11
Average of weighted mean score	4.20	4.55	4.31	3.95	3.35	

article (WMS 4. 09). The respondents of group II graded the prepared articles higher on suitability of the border colour combination to that of fabric colour of the article (WMS 4.24) followed by the parameters namely, overall appearance of the article (WMS 4.11), suitability of the border to the article (WMS 4.10) and placement of border on article (WMS 4.05) and workmanship of woven border (WMS 4.02). Hence it can be inferred that the respondents of two groups had different preferences as the rated the articles high on distinct parameters.

CONCLUSION

The woven borders were suitable for application in apparel and accessory articles as yoke, panel or borders at the hemlines. The border finished articles were acceptable among two groups of respondents. Waist coat for males had maximum acceptance on acceptability measures (parameters) followed by waist coat for females and ladies shirt by the both groups of respondents. Cap and stole had lower

consumer acceptance on acceptability measures by both the respondents of groups. The respondents of two groups had different preferences as they rated the articles high on distinct parameters. Most of respondents also expressed their willingness to purchase if such articles are available in market. Thus, the woven borders with *Aipan* designs patterns applied on the different articles in the present research study offered means for expanding design possibilities in clothing for the state and further this study preserve the valuable art of *Aipan*. The weaving of such borders and their application on textile based handicraft as well as apparel items and accessories offer an opportunity to local artisans.

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