

International Journal of Agriculture Extension and Social Development

Volume 8; Issue 5; May 2025; Page No. 286-296

Received: 18-03-2025
Accepted: 22-04-2025

Indexed Journal
Peer Reviewed Journal

Macrame art: Awareness amongst college-going girls and acceptance of macrame dress sketches

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DOI: <https://www.doi.org/10.33545/26180723.2025.v8.i5d.1902>

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Abstract

Macrame is a creative technique that involves creating practical and decorative items through intricate knotting using cords, ropes, or string to create visually appealing patterns, was widely practiced by women decades ago. However, like many traditional crafts, its popularity has waned over time. The study was conducted to explore the awareness about macrame art and acceptance of sketches of macrame dresses among college-going girls. It focuses on developing macrame dress designs through pencil sketching of dresses based on selected textile waste materials, resulting in ten sketches categorized under cotton thread, chiffon fabric, artificial leather, wool thread, and satin ribbon. To explore the awareness of macrame art, a study was conducted across three colleges in Ludhiana. The responses were collected from 90 college-going girls (18-26 years old). Out of 90 respondents, significantly 66 percent of the respondents were familiar with macrame and also practiced macrame at home, 22 percent of respondents were familiar with macrame but never practiced macrame due to lack of time, and 12 percent were not aware of macrame. Moreover, 52 percent of the respondents possessed macrame items such as bracelets, wall hangings, and belts. The dress designs were selected on the respondents' preferences. The majority of respondents favored multi-color combinations (42%) and knee-length dresses (61%) and Sleeveless dresses were overwhelmingly preferred (72%). For embellishments, beads, and buttons were the top choices among respondents. The respondents preferred A1 under cotton thread sketch with a maximum weighted mean score of 3.21. The first rank for chiffon fabric sketch was given to B1 with a maximum weightage mean score of 3.21. For the artificial leather fabric sketch, C2 with a weighted mean score of 3.01 was selected by the respondents. For wool thread and satin ribbon sketches, D1 and E2 were given first rank with a maximum weighted mean score of 3.19 and 3.03. The respondents attributed their awareness of macrame to their fashion design studies, whereas their peers in different departments remained unaware of this craft. This study suggests a necessity for providing macrame training to girls in various courses, ensuring the continued awareness and conservation of this ancient art. The study concludes that sketches serve as a crucial visual representation of the designer's vision, acting as a blueprint for the final product.

Keywords: Macrame, sketch designing, macrame dress, knots, training

Introduction

Textile Crafting involves various techniques and skills, such as embroidery, sewing, knitting, weaving, and quilting, using textile fibers, yarns, and fabrics. Macrame, a popular craft, uses specialized yarn or cords to create various items. This craft has become a booming trend, allowing individuals to personalize garments with handmade or recycled decorative elements (Soni, 2023) ^[16].

Macrame is the art of inter-knotting knotting of yarns without using needles and hooks to create practical or decorative items like handbags, key rings, mirror decorations, and wall hangings. It involves joining flexible materials like ropes, forming intricate designs, and using knots in everyday tasks. Various types of knots such as lark's head, square, half knot twist, and diagonal double half hitch knot are used to create intricate designs known for their durability and strength. It can also be used to secure

skill development for underprivileged women in semi-urban and rural sectors (Phillips 1970; Swami and Babel 2006; Horst 2013; Singh *et al.* 2014) ^[12, 17, 7, 15].

Macrame, a traditional textile craft, originated in the 13th century when Arab weavers introduced decorative knots into excess threads from towels and veils. The craft spread through Moorish conquests, reaching Europe via Spain and England during Queen Mary II's reign in the late 17th century. Sailors practiced macrame during their leisure time on ships, trading or selling their creations, leading to its global dissemination (Anonymous 2006) ^[2]. Ancient Greece saw knots with medical and puzzle applications, while the "Hercules" knot held cultural significance for early Egyptians and Greeks (Asmah 2005) ^[4]. Integrative methodologies and technologies fostered Macrame's progress in Ghana. Knots have decorated cultures for centuries, and mathematical knot theory links mathematics

and textile design through the role of free ends (Jules & Kliot 2005; Nimkulrat and Matthews 2013)^[9, 11]. Macrame combined with beadwork enhances artwork, creating diverse textures and patterns, and creating job opportunities, such as in Nigeria. Basic equipment includes cords, rings, pins, macrame boards, scissors, beads, measuring tape, embroidery needles, and crochet hooks (Cordstone 2011)^[6]. Various researchers have explored the realm of macrame in their studies. Kaur (2007)^[10] worked into the income-generating potential of macrame, crafting items like wall hangings, door chimes, necklaces, and more, with a total crafting time of around 49-50 hours. Their findings indicated promising revenue prospects from these products. Anuar and Daud (2011)^[3] used coloured wire for macrame jewelry, opting for silver wire, beading wire, and coated cable instead of traditional macrame thread. This alternative material offered flexibility and aesthetic appeal. Baisie (2014)^[5] employed organic dyed traditional fibers in crafting female accessories. Using weaving and macrame techniques, they designed items like clutches, hats, and sandals, emphasizing eco-friendly fibers and dyes. Singh *et al.* (2014)^[15] designed a 21-day macrame training program for skill enhancement, which included basic knot learning in the initial phase and the creation of accessories, pot holders, and lampshades in the latter part. The study demonstrated that 25 percent of respondents favored the training package, while 47.5 percent expressed interest in establishing macrame-based enterprises through self-help groups. Singh (2007)^[14] used macrame to design khadi garments, with tops and skirts being the most preferred constructions. Most consumers used macrame for household products and accessories, with 80% of them willing to pay higher costs. Sharon and Richa (2009)^[13] explored macrame for party wear dresses for teenagers, using nine different tops and six knots. The tops were unique and innovative, with reasonable prices. Joseph *et al.* (2011)^[8] explored macrame knots to create fashionable shrug designs for teenagers, with cord number 23 chosen due to its soft texture, good color, and high strength. The most preferred designs were off-shoulder and sleeveless. The total cost of each shrug was calculated, with a 40% profit. The estimated selling price ranged between ₹1,115 to 1,140. A market survey showed positive results regarding the acceptability and sale ability of the

developed shrugs. Ampomah (2015)^[1] utilized the macrame technique on locally available yarns to create garments and accessories. Various macrame knots were used, including half, square, double hitch, Josephine, and Chinese crown knots. The research found that cotton-polyester, woolen, jute and rubber yarns were easily available. The garments produced with different yarns were lightweight and moderately elastic.

This study also aimed to design the sketches of macrame dresses and understand the awareness of macrame art and acceptance of macrame dress sketches among college-going girls.

Methodology

The pencil sketching of dresses was selected for macrame dresses to present the macrame knots very clearly. Both the front and back of the dress were designed. A total of ten sketches were made based on selected textile waste material. Under each category, two sketches were developed.

A study was carried out in Ludhiana city across three colleges namely College of Community Science, PAU; Guru Nanak Girls College, Model Town and Khalsa College for Women, Civil Lines, involving a purposive selection of ninety college-going girls (thirty from each college) shown in figure 1. The respondents, aged between 18 and 26 years, were intentionally chosen due to their strong enthusiasm for contemporary fashion trends and their continuous search for unique dress ideas. Each respondent was personally approached and kindly asked to share their generous and unbiased viewpoints by participating in a questionnaire tailored to this specific research. To explore the preferences of the respondents, a structured questionnaire was developed.

The primary section of the questionnaire focused on the awareness of college-going girls about macrame such as macrame knots and articles possessed by them. The second section of the questionnaire centered on the respondents' preferences for developed macrame dress sketches, dress length, sleeve length, embellishment, and colour combinations for macrame dresses. Five dress designs were selected in each category based on the responses of respondents.

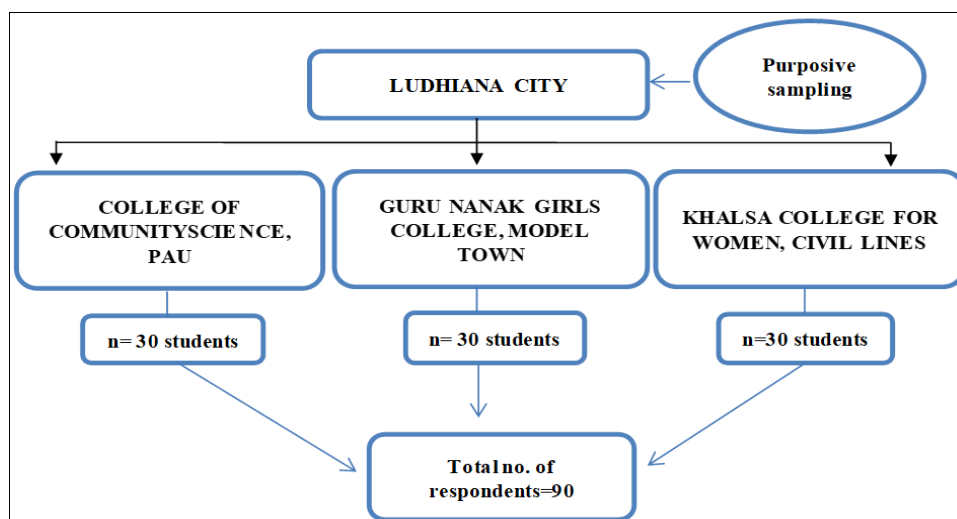


Fig 1: Selection of respondents

Results and Discussion

Five textile waste materials based on expert opinion were shortlisted for the development of macrame dresses (figure 2). Two variations of designs for each textile waste material were made using sketching, so overall ten sketches of dresses were made. The sketches were coded from A to E

and each variation was A1, A2, B1, B2, C1, C2, D1, D2, E1, and E2 respectively. The front and back of the dresses were sketched separately for clarity of design. The sketches were made using motifs such as floral, butterfly, owl, diamond honeycomb, etc. The sketches of the macrame dresses are shown in Figures 3 to 12.



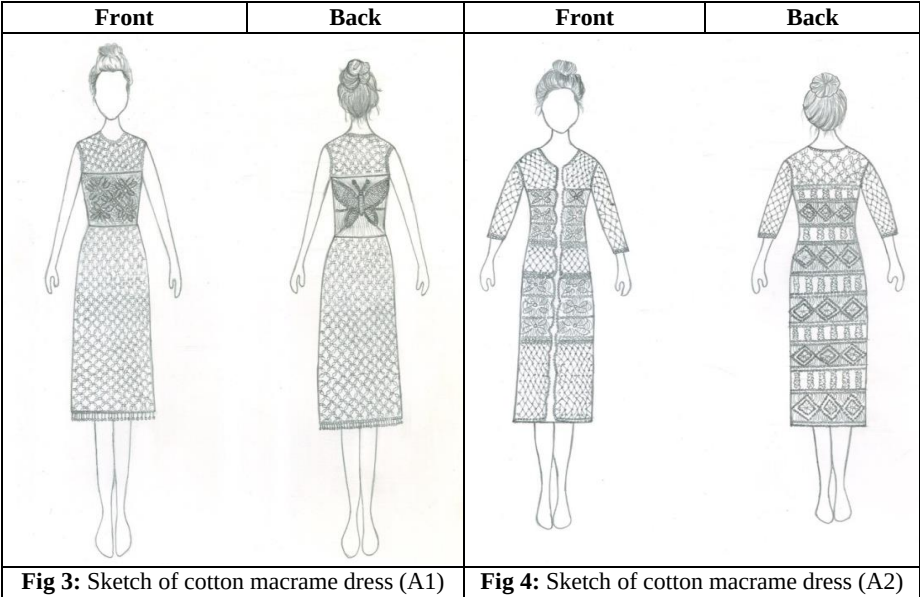
Fig 2: Selected Textile Waste Materials

1. Cotton thread dress

A1: In this sketch (figure 3), a floral motif for the front and a butterfly for the back were taken as the main motif. The floral motif was drawn with the use of a square, diagonal double hitch, and alternate square knot. The butterfly was drawn with hitch knot variations. The major part of the sketch was drawn with the use of an alternate square knot. An alternate hitch knot was used for finishing the dress. The sketch was made sleeveless and to knee length.

A2-In this sketch (figure 4), a floral motif for the front and a

diamond-shaped motif for the back were taken as the main motif. A floral motif was drawn with the use of a diagonal double hitch knot and a square knot. The diamond motif was drawn with square and diagonal double hitch knots. The major part of the dress was drawn with the use of an alternate hitch knot with some space. For finishing the dress sketch, an alternate hitch knot was used. The dress design was based on a shrug design with half-quarter sleeves and was drawn to knee length.

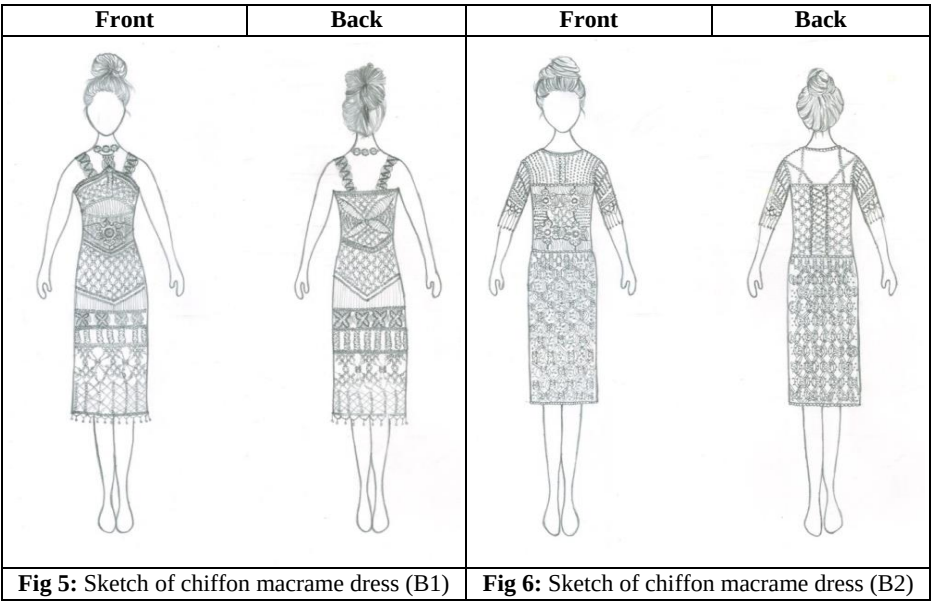


2. Chiffon fabric dress

B1: In this sketch (figure 5), a floral motif was taken as the main motif. For the front, a six-petal floral motif was drawn with the use of square and hitch knot variations. For the back, four petal floral motifs were drawn with hitch knot variations. The other portion of the dress design was drawn with both square and hitch knots. The dress design sketch had knee length and was sleeveless with attached stripes and

a necklace.

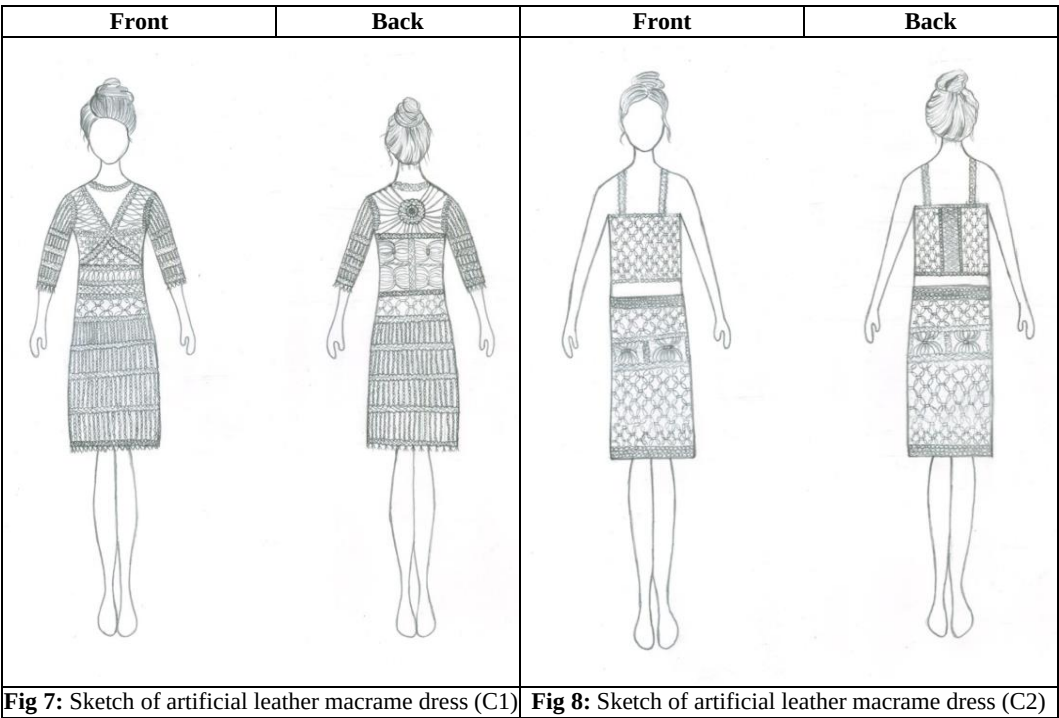
B2: In this sketch (figure 6), for the front, four floral motifs were taken similarly as in design B1. In the upper back part of the dress, a striped pattern in the center was drawn with an alternate double hitch knot. The left portion of the dress was drawn with the variation of square and hitch knot. This dress design was half-sleeved and had knee length.



2. Artificial leather dress

C1: In this sketch (figure 7), the front of the design was drawn with a variation of square and hitch knot. The upper back of the design was drawn with floral motifs. The dress design had half-quarter sleeves and was till mid-thigh in length.

C2: In this sketch (figure 8), the top of the design was a crop-top drawn with the use of square knot variation and alternate double hitch knot. The skirt was drawn with the use of a square knot and floral motif which was made with a square knot. This dress was till mid-thigh length and was sleeveless with attached stripes.

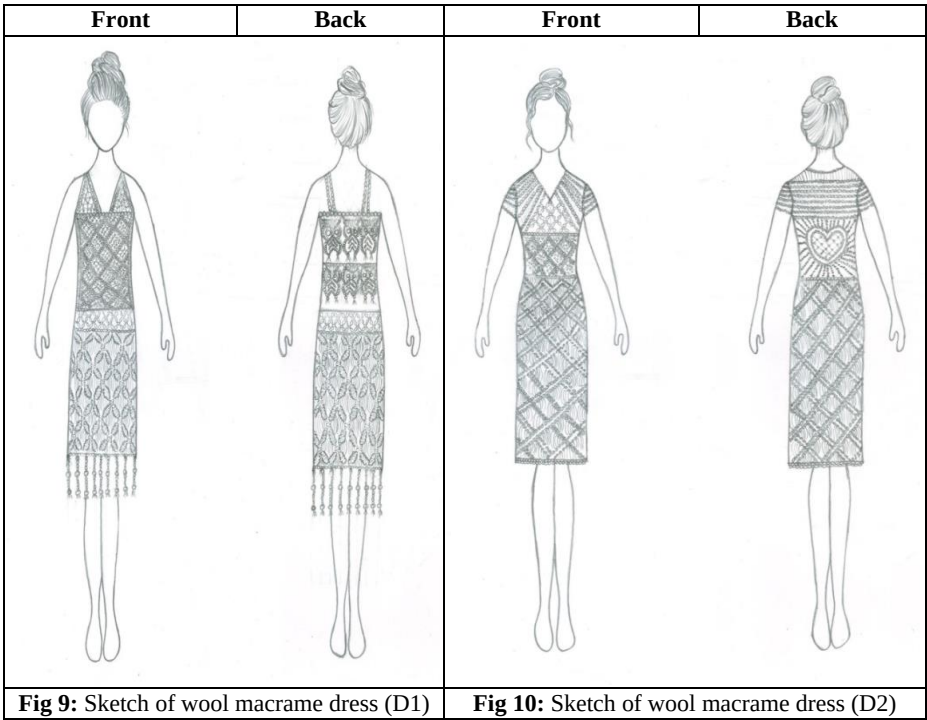


3. Wool thread dress

D1: In this sketch (Figure 9), the upper front of the dress design, a diamond-shaped motif, and in the upper back, an owl motif was taken. The diamond diamond-shaped motif was drawn with the variation of square and diagonal double hitch knots. The owl motif was drawn with a square knot, hitch knot variation, and half hitch knot. The other portion of the dress design was drawn with a floral pattern by the

use of square and hitch knots. The dress design was sleeveless and below knee length.

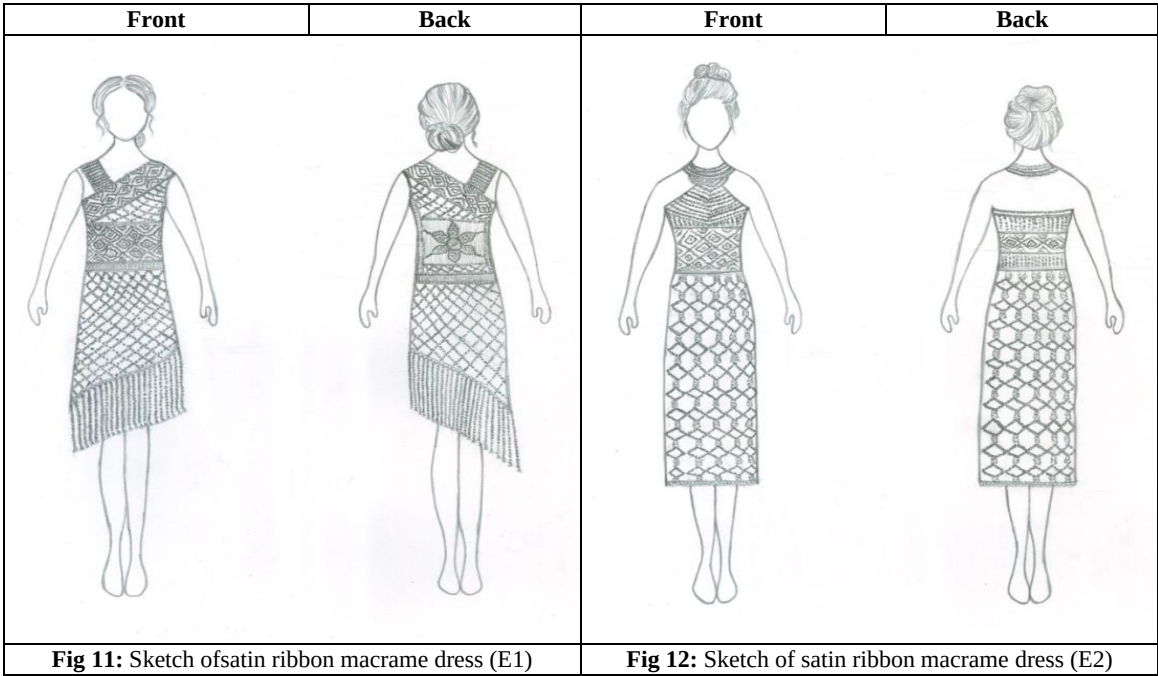
D2: In this sketch (figure 10), in the upper front, a diamond-shaped motif and in the upper back heart-shaped motif were drawn as the main motif. The variation of square and hitch knot was used in this design. The dress was above knee length and had quarter sleeves.



4. Satin ribbon dress

E1: In this sketch (figure 11), honeycomb and floral motifs were taken as the main motifs. This design was off-shoulder from one side with the attached strip. The variation of lark's, square, and hitch knot were used in this design. The dress design was drawn to knee length.

E2: In this sketch (figure 12), honeycomb, and hexagonal motifs, were taken as the main motifs of the design. Also, variations of Lark's knot, square, and hitch knot were drawn. This dress design was off-shoulder with an attached necklace design and was drawn to knee length.



Macrame awareness of the respondents and their preferences regarding sketches of macrame dresse

The awareness of the respondents for the macrame technique was evaluated using frequency distribution and percentages, as depicted in Figure 13. The figure illustrates that a significant majority of respondents (66%) accounting for a frequency of 59 were aware of the macrame technique

and also practiced macrame at home. 22 percent of respondents with frequency 20 were aware of macrame but did not practice macrame at home due to their having less time. In contrast, a smaller portion of 12 percent corresponding to a frequency of 11 indicated a lack of awareness about macrame. N=90

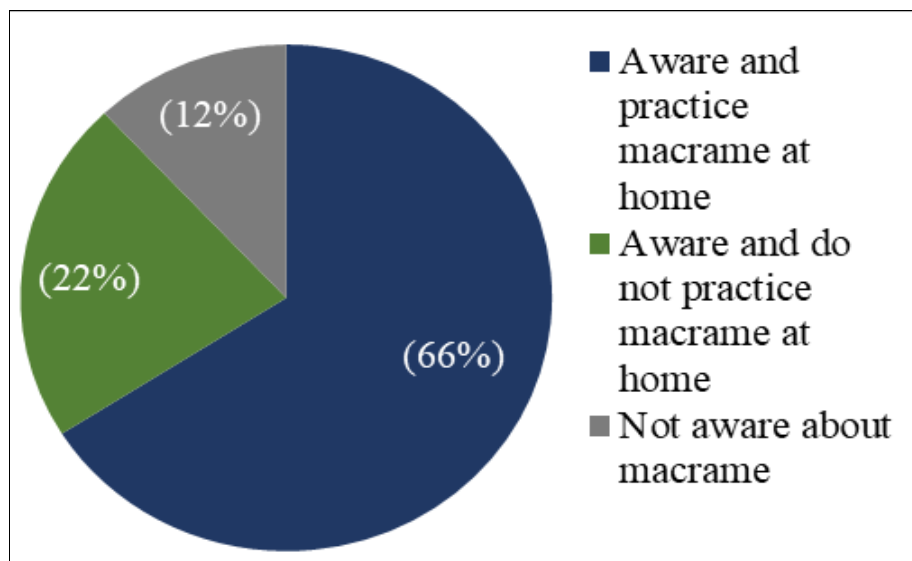


Fig 13: Awareness of macramé

Distribution of respondents based on using different macrame knots

The respondents were inquired about their preferred types of macrame knots, and the results are presented in Table 1. The data provides insights into the variety of macrame knots favored by the respondents, often using multiple types. The findings revealed that among the 59 respondents, the square knot was the most widely used, with the highest percentage

(88%) employing it. The half hitch knot was used by 53 percent of the respondents, while the lark's head knot was chosen by 51 percent. Additionally, 44 percent of respondents employed horizontal, vertical, and diagonal half-hitch knots. Other knots were employed by a smaller percentage of respondents. The least popular choice was the macrame knot with braiding, selected by only 3 percent of the respondents.

Table 1: Distribution of respondents based on macrame knots used by them n=59*

Types of Macrame knots	No. of respondents (F)	Percentage (%)
Square	52	88.14
Alternating square	14	23.73
Crossover square	12	20.34
Square picot	15	25.42
Half hitch	31	52.54
Alternating half hitch	14	23.73
Horizontal, Vertical, Diagonal half hitch	26	44.07
Zigzag with a double half-hitch	11	18.64
Lark's head	30	50.85
Alternating Lark's head	8	13.56
Reverse Lark's head	5	8.47
Overhead	10	16.95
Josephine	17	28.81
Macrame knot with braiding	2	3.39

*multiple choice

Distribution of respondents based on possession of macrame articles

The respondents were questioned about the macrame technique-based items they possessed, as depicted in Figure

14. The data indicates that 52 percent of the respondents with 47 in frequency possessed macrame articles. In contrast, 48 percent of the respondents did not possess any macrame items.

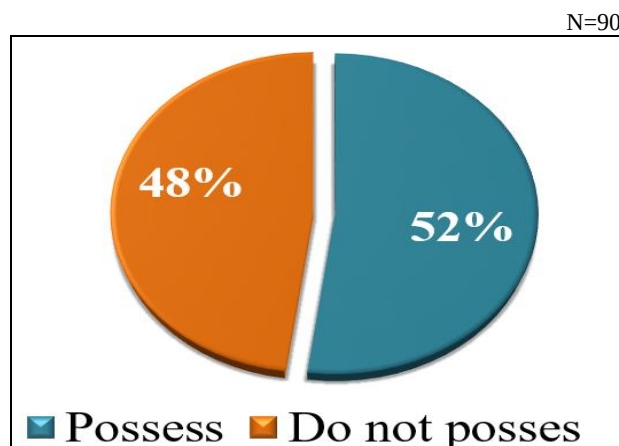
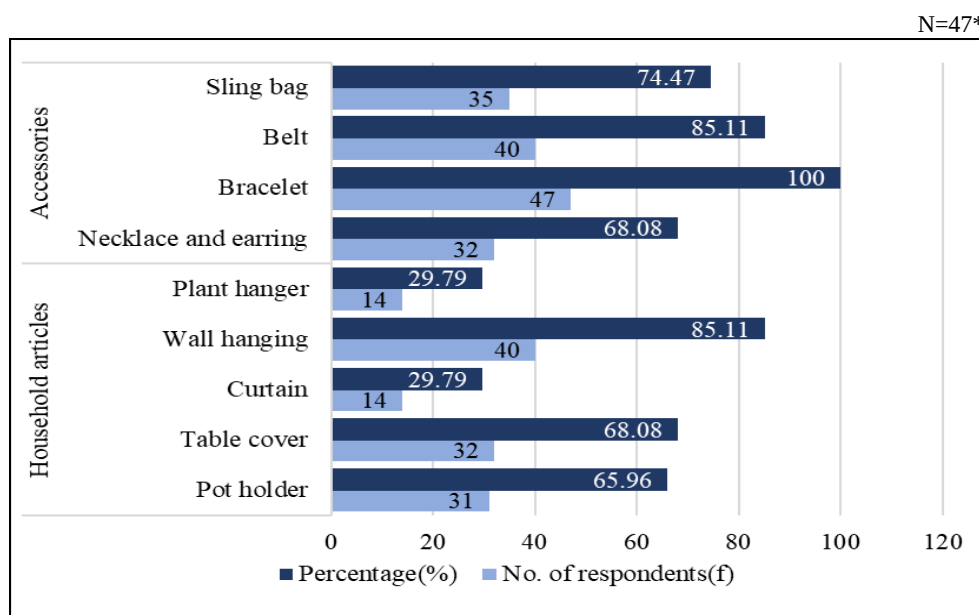


Fig 14: Possession of macrame articles by the respondents

Distribution of respondents based on the type of macrame articles possessed by them: Respondents who

possessed macramé items were inquired about the specific types of articles they possessed, as outlined in Figure 15.



*Multiple Choice

Fig 15: Macrame articles possessed by respondents

The findings indicated that in the household article category, approximately 85 percent of the respondents possessed macrame wall hangings, followed by 68 percent who had macrame table covers, and 66 percent who owned pot holders crafted using macrame techniques. Comparatively, the lowest ownership rates were observed for macrame plant hangers and curtains, with only 30 percent of respondents possessing these items. In the accessories category, the collected data revealed universal possession of macrame bracelets among the respondents. Moreover, 85 percent of the respondents owned macrame belts, while 74 percent also possessed macrame sling bags.

Preference of respondents for colour combination, sleeve length, dress length

The respondents were asked for preferred colour choices,

and sleeve lengths for macrame dresses based on sketches shown to them. Information presented in Fig 16 depicts that the majority of the respondents (42%) preferred the multi-color combination for macrame dresses while 29 percent preferred single and two-color combinations for macrame dresses respectively. This could be used in two or more colours to give a bright appearance to the dresses. For the length of dresses, the majority of the respondents (61%) preferred knee length for macrame dresses. Furthermore, 20 percent of respondents preferred mid-thigh length dresses, and only 19 percent preferred below-knee length for macrame dresses. The maximum percentage of respondents (72 %) preferred sleeveless macrame dresses, followed by 11 percent who preferred quarter sleeves and 9 percent who preferred half-sleeve dresses. Very few respondents (8%) preferred full sleeves for macrame dresses.

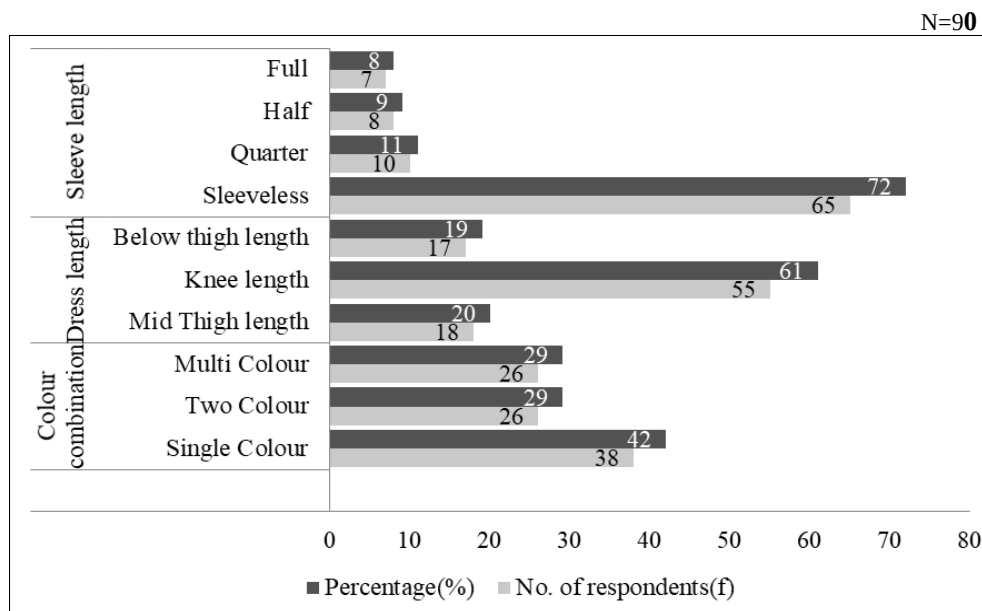


Fig 16: Preferences of respondents for colour combinations, sleeve length, dress length

Preference of respondents for the embellishment of macrame dresses

The respondents were asked about the embellishment of macrame dresses. The results are shown in Figure 17. The data revealed that all respondents liked the idea of embellishment on macrame dresses. Embellishment using beads and buttons was most preferred by the respondents with a weighted mean score of 5.26 and first rank

respectively. Embellishment using mirrors and stones with weighted mean scores of 4.88 and 4.64 were given second and third rank respectively, followed by laces (WMS 4.47), belts (WMS 4.18), and ribbons (WMS 3.98) which were given fourth, fifth and sixth rank respectively.

Preference of respondents for the embellishment of macrame dresses

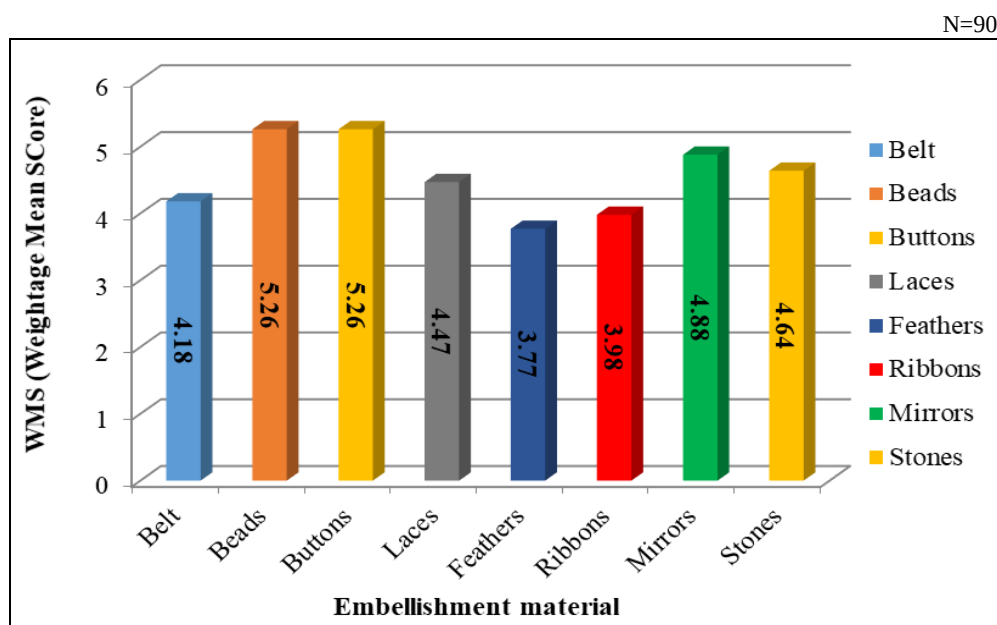


Fig 17: Preferences of respondents for embellishment of macrame dresses

Preference of respondents for the sketches of macrame dresses

The respondents were shown the sketches that were drawn and asked to rank them based on the overall appearance of the design. The results are presented in Table 2. The data revealed that A1 was the most preferred design for cotton thread sketch with a maximum weighted mean score of

3.21. The first rank for chiffon fabric sketch was given to B1 with a maximum weightage mean score of 3.21. For the artificial leather fabric sketch, C2 with a weighted mean score of 3.01 was selected as the best design by the respondents. For wool thread and satin ribbon sketches, D1 and E2 were given first rank with a maximum weighted mean score of 3.19 and 3.03, respectively.

Table 2: Preference of respondents for sketches of macrame dresses, N=90

Textile waste material	Sketch code	Weighted mean score (WMS)	Rank
Cotton thread	A1	3.21	I
	A2	2.73	II
Chiffon fabric	B1	3.21	I
	B2	2.73	II
Artificial leather fabric	C1	2.92	II
	C2	3.01	I
Wool thread	D1	3.19	I
	D2	2.75	II
Satin Ribbon	E1	2.90	II
	E2	3.03	I

Details of finalized sketches of macrame dresses

The sketches of macrame dresses were coloured based on selected sketches of dresses, availability of textile waste material, and preferences of respondents for dresses regarding colour combination, dress length, sleeve length, and embellishments. All dress designs were sleeveless. Cotton thread dress, chiffon fabric dress, and satin ribbon dress designs were made with multi-colour combination and

were till knees. The leather fabric dress design was single colour with mid-thigh length. The wool thread dress design was two-colored with below-knee length. The embellishment of cotton thread, wool thread, chiffon fabric, and leather fabric was beads, and for satin ribbon and chiffon fabric dress was buttons. The finalized coloured sketches are shown in Fig 15-19.

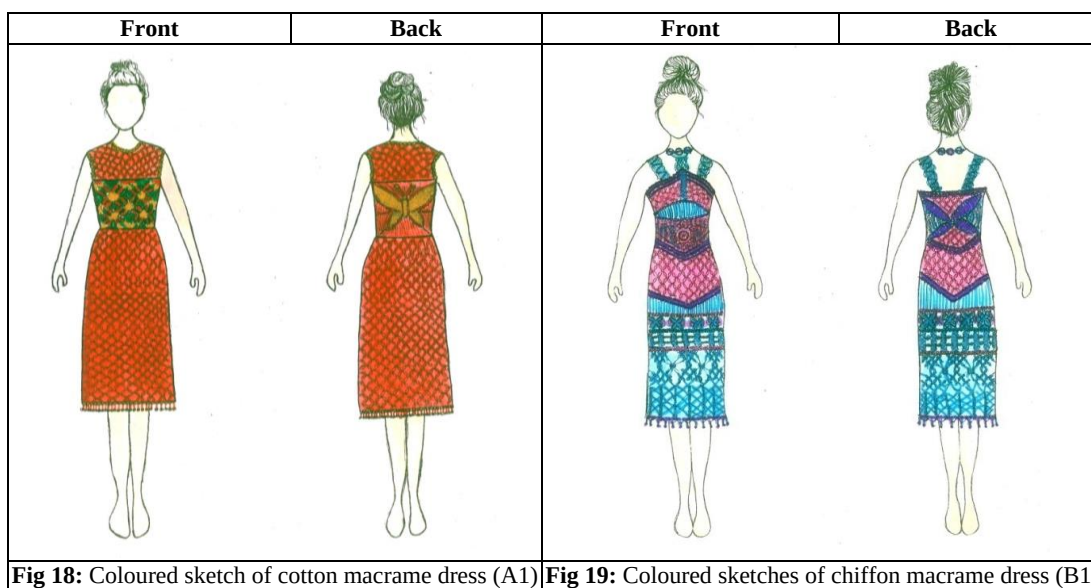


Fig 18: Coloured sketch of cotton macrame dress (A1) **Fig 19:** Coloured sketches of chiffon macrame dress (B1)

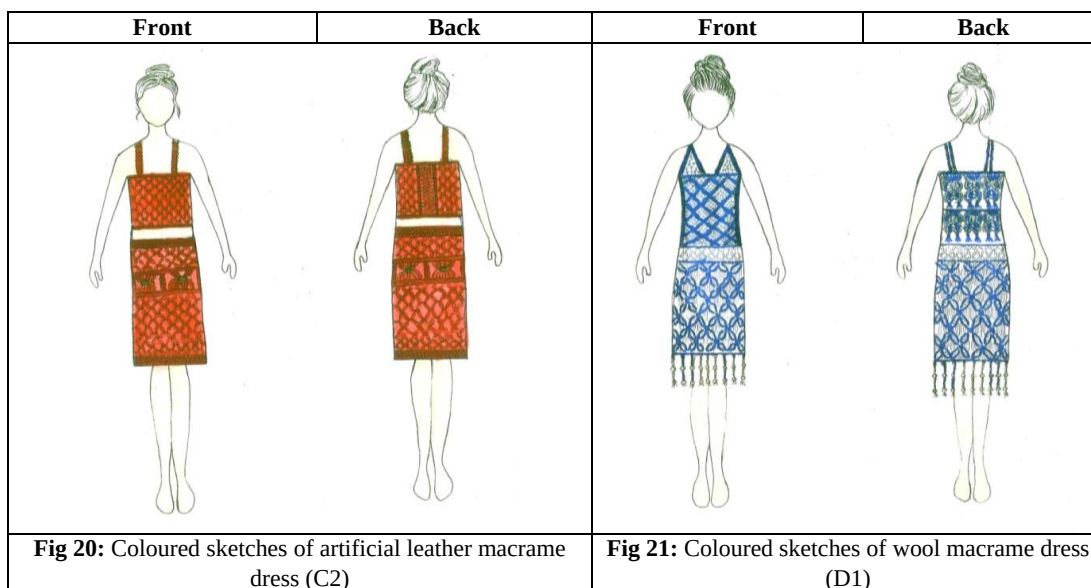


Fig 20: Coloured sketches of artificial leather macrame dress (C2)

Fig 21: Coloured sketches of wool macrame dress (D1)

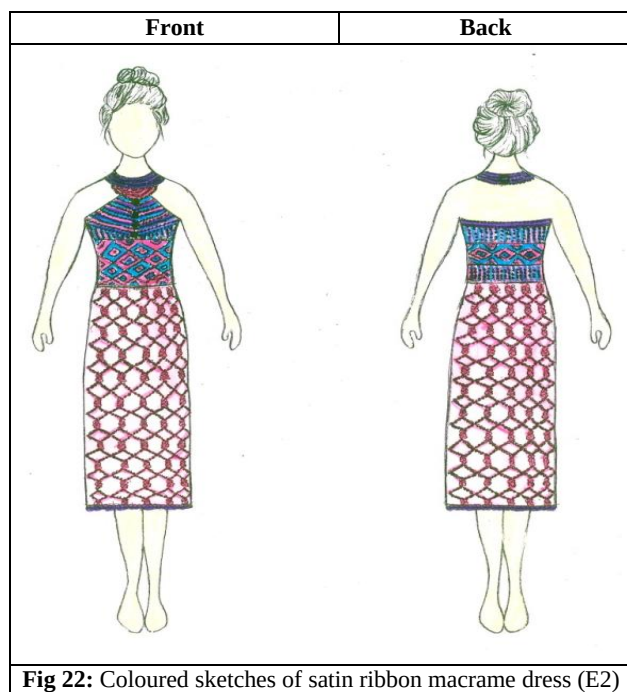


Fig 22: Coloured sketches of satin ribbon macrame dress (E2)

Conclusion

Sketches of any dress design serve as a visual representation of the designer's vision and act as a blueprint for the final product, particularly in the realm of macrame dresses. The development of these sketches was intricately aligned with the available waste materials and respondents' preferences. In this study, respondents provided favorable feedback for the sketches, contributing to the selection of embellishments, color combinations, dress lengths, and sleeve lengths. Pencil sketching emerged as the preferred method for its ease in capturing intricate designs, and both pencil and sketch colors were employed for coloring the sketches. These sketches and designs helped in the development of macrame dresses. The result of the study showed that respondents' keen interest in understanding the details of macrame art, and their desire to develop a broader collection of macrame articles in the future. The conclusion drawn from the study was that macrame held substantial popularity among the surveyed girls, attributed to their familiarity with traditional crafts. In contrast, respondents indicated that students not focused on fashion might possess a lower awareness of macrame. This highlights the necessity for providing macrame training to young female students enrolled in different disciplines. Such training initiatives would serve to ensure the sustainability and continuation of this intricate and exquisite craft, safeguarding its awareness for future generations.

Recommendations

The field of macrame designing holds promising future scopes as creativity, sustainability, and unique craftsmanship continue to be valued in the fashion and home decor industries. Here are some future scopes in the field of macrame and designing:

- Macrame designers may find opportunities to collaborate with other industries, such as the wedding industry for bridal wear or the events industry for decorative elements. Collaborations can open up new markets and creative possibilities.

- Macrame dress designs are now being created digitally using software like Corel DRAW, offering precision and versatility.
- Training programs on design software and sketching are empowering designers, both traditional and digital.
- Importantly, macrame craft serves as a valuable income source for rural women, combining traditional skills with economic opportunities. The integration of traditional artisans with modern technology and training initiatives is shaping a dynamic and inclusive landscape in macrame design.

References

1. Ampomah T. Design and production of garments and accessories using macrame technique and locally available yarns [MFA thesis]. Kumasi (Ghana): Department of Industrial Art, Kwame Nkrumah University of Science and Technology, 2015, p. 1-123.
2. Anonymous. History of Macrame [Internet]. 2006 [cited 2017 Aug 9]. Available from: <http://www.ancienteartthehealing.com>
3. Anuar NSM, Daud MZ. Coloured wire as an alternative material for macrame jewellery: Feasibility study [Internet], 2011 [cited 2018 Apr 4]. Available from: <http://paperzz.com/doc/558454/coloured-wire-as-analternativematerial-for-macrame>
4. Asmah AE. The Art of Macrame [Thesis]. Kumasi (Ghana): Department of Industrial Art, Kwame Nkrumah University of Science and Technology, 2005. (Original not seen. Cited in Asmah AE, Koomson E, Daitey ST. The development of Macrame as a viable economic venture in Ghana. Eur. J Res Ref Arts Humanit. 2015;3:13.
5. Baisie A. Adopting organic dyed traditional fibres for the production of selected fashion accessories [MPhil thesis]. Kumasi (Ghana): Department of Integrated Rural Art and Industry, Kwame Nkrumah University of Science and Technology, 2014, p. 1-110.
6. Cordstone. One Stop Macrame Shop: The How to Guide [Internet], 2011 [cited 2017 Oct 3]. Available from: www.Macramelovers.com/blog
7. Horst D. An experimental study: comparing a pattern approach to a creative approach in teaching macrame [dissertation], [University name unknown], 2013, p. 1-150.
8. Joseph R, Kaur P, Verma A. Designing of shrugs using decorative knot craft "macrame" [Internet], 2011 [cited 2018 Sep 12]. Available from: https://www.researchgate.net/publication/293075762_Designing_of_shrugs_using_decorative_knotcraft_Macrame
9. Jules K, Kliot K. Macrame: Sources of Fine Knotting. Berkeley (CA): Lacis Publications, 2005. (Original not seen. Cited in: Asmah AE, Koomson E, Daitey ST. The development of Macrame as a viable economic venture in Ghana. Eur J Res Ref Arts Humanit. 2015;3:6.
10. Kaur M. An exploratory study of the income generating potential of Macrame [MSc thesis]. Ludhiana (India): Punjab Agricultural University, 2007, p. 1-95.
11. Nimkulrat N, Matthews J. Mathematical textiles: the use of knot theory to inform the design of knotted textiles. Eur J Res Ref Arts Humanit. 2013;3:6-7.

12. Phillips MW. A Step-By-Step Macrame. New York: Western Publishing Company, Inc, 1970, p. 5-6.
13. Sharon M, Richa R. Macrame-A new technique for making apparels. *Tex Trends J.* 2009;51:39-42.
14. Singh A. Design of Khadi garments with Macrame technique [MSc thesis]. Rajasthan (India): Department of Clothing and Textiles, Banasthali Vidyapith, 2007, p. 1-88.
15. Singh G, Singh A, Singh P. Training package on Macrame for skill development. *Asian J Home Sci.* 2014;9:61-66.
16. Soni NM. An Overview of Crochet and Macrame: Implication on Social Well-being. *IAHRW Int J Soc Sci Rev.* 2023;11(2):310-314.
17. Swami P, Babel S. Consumer preferences for value added articles developed from goat hair. *Indian J Small Ruminants.* 2006;12:188-190.