SKILL DEVELOPMENT AMONG RURAL WOMEN FOR UTILIZATION OF USED TEXTILE

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MISS JYOTIKA CHOUDHARY

THESIS

MASTER OF SCIENCE (HOME SCIENCE)

IN

Department of Textiles and Apparel Designing

2019

DEPARTMENT OF TEXTILES AND APPAREL DESIGNING

MAHARANA PRATAP UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, UDAIPUR (RAJASTHAN)

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THESIS

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MASTER OF SCIENCE IN HOME SCIENCE

By

MISS JYOTIKA CHOUDHARY

2019

MAHARANA PRATAP UNIVERSITY OF AGRICULTURE AND TECHNOLOGY,

COLLEGE OF COMMUNITY AND APPLIED SCIENCES,

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This is to certify that this thesis entitled**"Skill development among rural women for utilization of used textile."** submitted for the degree of **Master of Science** in the subject of **Textiles and Apparel Designing** of the **MaharanaPratap University of Agriculture and Technology, Udaipur** embodies bonafide research work carried out by **Miss JyotikaChoudhary**under my guidance and supervision and that no part of this thesis has been submitted for any other degree. The assistance and help received during the course of investigation have been fully acknowledged. The draft of the thesis was also approved by the advisory committee on.....

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This is to certify that **Miss JyotikaChoudhary**student of **Department of Textiles and Apparel Designing,** College of Community and Applied Sciences, Udaipur has made all corrections/modifications in the thesis entitled **"Skill development among rural women for utilization of used textile."**which was suggested by the external examiner and the advisory committee in the oral examination held on _____. The final copies of the thesis duly bound and corrected were submitted on _____ are enclosed herewith for approval.

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This is to certify that **Miss JyotikaChoudhary**(M.Sc. Scholar) has worked under me on **"Skill development among rural women for utilization of used textile."**

1. I have monitored her research work.
2. My self and the scholar were in contact with the committee members and the research work was reviewed regularly.
3. The advisory committee members have gone through M.Sc. thesis critically and made the corrections as per requirement.

Dr. Rupal Babel
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Place – Udaipur

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CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF PLATES

LIST OF APPENDICES

INTRODUCTION

Apparel and textile industry is a one of the most ancient and an established industry. Due to advancement in technologies, industrialization and rapid change in fashion, there is huge production of textiles and production is always associated with some form of pollution and waste. In present life style we cannot limit the production but we can find out infinite alternative ways of recycling to reduce the burden on nature. These Eco friendly ways are very important not only to save nature but to secure our future generations.

Skill development for rural women is a process whereby rural women are able to organize themselves to increase their own self reliance, to assist their independent right to make choices and to control resource which will assist in challenging and eliminating their own subordinate and it is widely recognized that women work and economic capabilities can facilitate them to achieve their own control over resource and grow self confidence and self esteem. The rural population migration to urban area is due to lack of employment opportunities. The rural women are school droppers who lack in productive skill. The poverty and unemployment problems will be solved through vocational skill training inputs and they will become a successful entrepreneur. With the help of this skill training women will be able to enter the social network system and that will help them to gain more decision making power, have significant and positive impact on women status. Effective awareness of women can raise their lives, social standards which enables them to reduce poverty and develop feeling of empowerment at economic as well as social level (Babel and Sharma, 2016).

The fashion industry is known for its un-sustainability with rapid changing trends, high risk and planned obsolescence, contributing millions of tons of waste clothing to landfill, destruction and dumping. Post consumer textile waste is generally an ignored area with strong reuse and recycling potential. Post consumer waste can be a garment or a household article that the owner does not require any more or has decided to discard, out of fashion and seasonal closeouts fit into this category. These unused/ not wearable textiles are passed on to family members or friends, donated to charities and sometimes also given to domestic helpers.

The basic principle of reutilization means using something again (reusing) for which it was not originally purposed. It is the process of increasing the lifespan of materials or products by transforming waste into usable materials. Refashioning is an important component of modern waste management. Reusing unwanted clothing reduces land fill waste as well as the amount of resources needed to produce new clothing (Zamani, 2014).

Refashioning of the existing garments eradicate the necessity to buy new, and simultaneously creates something far more unique and in some ways more attractive than mainstream fashion. Refashioning clothes and accessories is a great way to renovate one‘s wardrobe without wasting money for buying new things at the retail store. Renovation and refashioning is done by changing the style of the used garments and making quilts, rags, rugs, and many other household articles (Kaur, 2016).

Fashion and clothing play many roles in our lives. For making them more interesting, they need to be well designed and if they are also safe for environment, they would have dual advantage. Eco-fashion is not just good but an extraordinary idea in this world full of waste textiles. The product produced should be safe and exceptionally different from those that already exist in market. Recycling is thus a great challenge in today‘s scenario. The value of recycled and up cycled design is that it employs materials that have already been produced, whether considered to have worth or not, whether already used or not (Brown, 2013).

Many recycling activities can be seen in day to day lives of many Indians which are lasting since long and generally considered as low standard and substitute to overcome financial crises. Some of the common and long standing practices are- use of old clothes for new born child as they are comparatively soft, free from surface finishes, easily available and low in cost. Soft cotton clothes and sarees are commonly used as very good substitute of sanitary napkins as these are more hygienic and cheaper. Use of old clothes for dusting and moping in household activities, Use of fabric scraps for stuffing soft toys, pillow and mattresses, use of old precious silk sarees in making of cushions, curtains, bedcovers and other household items and passing precious traditional textile pieces generation to generation as memento are some of the very common practices still continue in India and many parts of world. There is cult of designers and NGO who rejuvenate old precious sarees into new value added products with a new look.

Designing is an art and the art is a product of the creative process. It is the human power to conceive, plan and realize the products that serves human beings in the accomplishment of any individual or collective purpose (Saxena, 2012).

India with an estimated population of 1.33 billion in 2017 and textiles being 4 per cent of India's Gross Domestic Product (GDP), the annual consumer expenditure on clothing and footwear is almost 68 billion dollars. Currently, the short lifecycles of apparel product due to rapid fashion cycles and increased buying power of Indian consumers in urban areas is resulting in significant amounts of postconsumer textile waste (PCTW) in the form of used clothing or even second-hand clothing (SHC). Post-consumer textile waste mainly originates from household sources and consists of garments or textiles which the owner no longer needs as it was. Though, recycling of textiles was a domestic craft in India and currently there are textile clusters and small scale industries to work on second hand imported clothing. These clusters also develop a range of products like recycled yarns, doormats, prayer rugs, blankets and bed linen. The leftover garment pieces are also sold as industrial wipers for the paints, chemicals and construction industries, for both local and international buyers in Japan and Australia, but there are limited studies to evaluate the channels of recycling of post-consumer apparel waste in India.

(https://www.omicsonline.org/open-access/recycling-of-postconsumer-apparel-waste-in-india-channels-for-textile-reuse-2165-8064-1000331-98128.html)

Post-consumer textile waste is defined as any type of garment or household article made from manufactured textiles that the owner no longer needs and decides to discard. These articles are discarded either because they are worn out, damaged, outgrown, or have gone out of fashion. These textile products are sometimes given to charities and passed on to friends and family, but additionally are disposed of into the trash and end up in the municipal landfills (Hawley, 2008).

JUSTIFICATION OF THE STUDY:

The present study was based on the value addition of used textile. Knowledge impartment about the reuse, recycle and value addition of used textile and a training programme will be conducted among rural women. The purpose and selection of the present study is purely based on empowering rural women through skill development which helps them in supporting themselves as most of the rural women are school drop outs who has no or very minute skill set. The training programme enables them to develop their entrepreneurial skills and reduce the landfills in rural area, which is

helpful in both economical growth of rural women and a step towards nature friendliness as landfills can be reduced. Training will help the women to develop their skill set and confidence level in terms of entrepreneurial development, as a source of supporting income and to reduce textile waste which is prevailing and growing day by day. Keeping in mind the above aspects and fundamentals the present study "Skill Development among rural women for Utilization of used textile" was conducted with following objectives:

OBJECTIVES OF THE STUDY

1. To develop utility items using used textile.

2. To impart training on development of utility items through used textile.

3. To assess the impact of rural training on women.

OPERATIONAL DEFINITION

- **Skill development–** Enhancement of existing skills or introduction of vocational skills for inmates.

DELIMITATION OF THE STUDY: The study was delimited to the-

- 18-40 years old rural women was selected.
- 5 utility items were developed from used textile.

IMPLICATIONS OF THE STUDY:

- Present study helps to design and develop the utility items from utilization of used textile.
- The study also proposed innovative ways for the utilization of old clothes through different products development.
- The present study was serving as a guideline for the rural women's to income generation.
- Bringing out the creativity by imparting employable vocational skill to the rural women.
- This study will be helpful for rural women empowerments.
- This study will provide valuable literature about the development of utility items. It will provide valuable sources of reference material to the students.

REVIEW OF LITERATURE

The summaries of the writing of recognized authorities and of previous researchers have been subsumed in this chapter. It provides the testimony that the researcher is familiar with what is already known and what is still unknown and untested.

It provides a basis for the theoretical frame work, provides an anticipatory insight into method and procedures, suggests empirical definition of major concept, provides a basis for interpretation of finding and finally support the finding. In view of this, an attempt has been made in this chapter to present an overview of the earlier research work done which has direct to indirect bearing on the present study. The review of literature has been presented into following heads–

2.1 Utilization of used textile

2.2 Designing of utility items

2.3 Skill development through training programme

2.1 UTILIZATION OF USED TEXTILE

Melania (2007) found that the organized groups of rural women producers devoted to agricultural and other activities are now common place. In some cases, it is women who manage the initiatives ; in others, women play a key role in small, family-run businesses or enterprises. When rural women work in the informal sector, it is generally regarded as a survival strategy and as the feminization of rural poverty. In fact, women micro-entrepreneurs are involved in a wide variety of situations and contexts, both in rural areas and throughout their respective countries. Whether these small rural businesses manage to become consolidated enterprises depends on a combination of factors related to business performance and structural aspects such as the development of rural economies, the availability of pubic goods and services, market access, the performance of labor markets and gender-related disparities.

Hawley (2008) reported that the pre-consumer or post-industrial textile waste consists of by-product materials from textile, fiber and cotton industries that were re-manufactured for the automotive, aeronautical, home building, furniture and other

industries. Post-consumer waste is defined as any type of garment or household article made from manufactured textiles that the owner no longer needs and decides these items were sometimes given to charities but often were put in trash and end in landfills. This results in issues of over consumption and disposal of unused clothes leading to burdening of the resources throughout the world.

Gupta (2009) conducted a study on Recycling of textile waste in a small clusters and its contribution on the socio-economic upliftment of the community conducted a survey to find out sustainability models practiced across the clusters of India, where used clothing was collected and designer Value added products like that hat, bags and jackets were made to order. Gupta further analyzed the work environment of a small cluster and presented recommendations for improving the economic well-being of the community.

Oakdene (2009) concluded in the study that textile waste consists of post-consumer textile waste, including any type of discarded garments and household articles made out of textiles, and pre-consumer textile waste containing by-products or residues from processes in home furnishing, apparel, furniture, automotive or other industries.

Oke (2010) described that about 4 million tons of post consumer and industrial fibrous textile and carpet waste was land filled each year in the US. Many carpet and textile manufacturers, fiber and chemical suppliers, recycling companies and academic institutions are actively pursuing various methods to recycle fibrous waste. The state of the art in the field of chemical recycling of polymers, textile waste and carpet, Cement Kiln Dust (CKD), old newspapers (ONP), domestic and municipal organic waste was reviewed in this study.

In a study on communication sources and utilization pattern of rural farm youth, Roy, *et al*. (2010) found that more than half of the rural youth were found to view television regularly, 38 per cent and 44 per cent of rural youth listened to All India Radio (AIR) programmes regularly and occasionally, respectively. A good number of Farm youth consulted the newspaper for information. Farmers' fair / cattle fair also contributed as good sources of farm information. Farm demonstrations, extension materials (leaflets, folders, posters etc.) and farm journals were rarely consulted by

them. The major sources of communication were personal localite sources followed by mass media and personal cosmopolite sources.

Gambhir (2011) stated that process of recycling the cotton fabrics. The process of present invention re-use waste garments and rags to manufacture fresh fabric. The rags are collected and recycled in an inventive process so as to make recycled cotton products having quality and appearance as per the today's market standards. The process of present invention is environment friendly in nature. The process is novel, inventive and at the same time not very complex.

Anonymous (2011) stated that tones of old clothes end up in landfill. Manufacturers and fashion houses need to think harder about recycling. With reprocessing many textile fibers a challenge, dumping old clothes was often taken as the easy option. One hurdle for increased textile recycling was that the various fibers that comprise clothing make reprocessing and recycling a challenge. Some materials such as cotton and linen can be composted, but petroleum-based fibers such as polyester have little chance for reuse. (http://www.theguardian.com/sustainable-business/textile-recycling-challenges-industry)

Gupta and khare (2012) stated that Value Creation in post consumer apparel waste the concepts of recycling, together with reduce and reuse have been ingrained in the social milieu of India. Traditional societies had in-built models of sustainability, through reuse & recycling. Such practices were ingrained into various aspects of their daily lives to such an extent that over time they had got interwoven into the social, cultural as well as economic fabric of their lives and eventually had evolved into art forms reflecting on handicrafts.

Meadows and Goudeau (2012) reported that Nearly 100% of all household textiles and apparel can be recycled. One Group received a follow-up survey after 3 ½ months. After the educational sessions, awareness and perceived importance increased, and donating unwanted clothing to churches or charities became the preferred option, while discarding in the trash became the least desirable option. Extension professionals can engage consumers in a unique area of waste management. The resulting Extension fact sheet lends curriculum support.

Sharma and Prajapati (2012) reported that the strength of kneaf and resistant to rot and mildew make this fiber very unique in diverse end uses. Kneaf fibers were

treated with chemicals to soften and improve fibre properties and then blended with cotton having 10 per cent, 25 per cent and 50 per cent and spun into yarns and knitted into fabric. Its goods adhesion because of its physical structure and its strength make it well suited for home furnishing applications. Cotton/kneaf blends can provide a new texture for textiles to be used in apparel and home furnishing industry.

Goudeau (2012) conducted a study on an unexplored direction in solid waste reduction: household textiles and clothing recycling. The study demonstrated that consumer education positively influenced attitudes towards recycling. More exposure to textile and apparel recycling is needed to strengthen participants perceived importance of the issue. After the educational sessions, awareness and perceived importance increased, and donating unwanted clothing to churches or charities became the preferred option, while discarding in the trash became the least desirable option.

Altum (2012) reported that effective utilization and disposal of textile wastes requires an accurate prediction of solid waste generation. Recycling methods, products and the profile of recycling sector were investigated. The raw materials most used were cotton, which was 29 per cent of raw materials used and polyester, which was 24 per cent of raw materials used.

Wang and Lee (2012) Stated that The Methodology of Utilization of Waste and Recycled Materials in Construction The use of solid waste and recycled materials is becoming increasingly important in the construction practice for energy, natural resources, and environment conservation considerations. In the United States, significant quantities of waste are generated every year. The majority is landfilled at tremendous economic and environmental expense. One of the main reasons for low level of waste and recycled material utilization is the lack of quantified criteria to guide extensive use for a given waste material in special uses. Laboratory testing, field evaluation, and quantification work with appropriate specifications and quality requirements are equally important for the comprehensive use of waste materials in construction. It is essential to investigate the compositional and physical properties of a specific solid waste and identify any potentially negative characteristics. Moreover, to achieve appropriate and optimum utilization of a specific waste, it is necessary to inclusively understand the conventional material that waste may replace or incorporate with, focusing on the production, properties, design methods, construction

uses, and specifications. This paper enunciates the methodology that needs to be followed for the extensive utilization of waste and recycled materials in construction.

Mathur and Sohi (2013) conducted a study on Recycling waste materials to construct handbags. Threat to our environment from wasteful consumption and industrial effluents has resulted in an increased awareness toward recycling and reusing waste materials. A market conducive to innovative creations from recycled material is evolving and finding acceptance amongst the environment conscientious consumers. The author further reported that the present proved to be a successful endeavour both from the consumer as well as the market point of view. It has shown that with a little creativity and an aim to conserve virgin materials to reduce our carbon footprint, it is possible to produce something useful and aesthetically pleasing out of waste. It can also serve as an idea for community outreach wherein collaboration with NGOs working towards environment sustainability and women empowerment through capacity building, can provide a source of generating a secondary income to rural women by converting trash into cash.

Ekstrom and Salomonson (2014) revealed in Reuse and Recycling of Clothing and Textiles—A Network Approach The accelerated pace of consumption in the Western world has led to an increase in clothing and textiles disposed of in the garbage rather than being reused or recycled. The purpose of this article is to increase understanding of how clothing and textile consumption can become more sustainable by demonstrating how members of a network view and deal with this problem. The study is based on meetings over one and a half years and on a survey.

Bhatia, *et al.*(2014) described the post consumer textile waste usually to any products that the individual no longer needs and decides to discard due to wear or damage and normally includes used to worn clothing, bed linens, towels, and other consumer textiles. Post consumer waste which can be recovered are clothing, drapes/curtains, towels, sheets and blankets, clean rugs and sewing remnants, table cloths, belts, hand bags, paired shoes and shocks.

Gupta (2014) stated that the study on Potential use of shoddy yarn for development of textile products was carried out in six shoddy units, three each in Ludhiana and Amritsar districts of Punjab. In shoddy units of Ludhiana, 38 per cent polyester textile waste was used as raw material followed by wool (32%) and acrylic

(30%); whereas in Amritsar majority of the units were using woollen waste (60%) as raw material followed by acrylic (30%) and polyester (10%). Only blankets were woven in both districts and yarn was spun on worsted spinning system. Preferences were taken and twenty four designs were developed for preparing four prototype samples each in cushion cover, table mat, carry bag, wall hanging, stole and muffler.

Kaur(2014) studied on the Development of eco-fashion accessories from leftover/ waste of zari/brocade fabrics. The results of the study revealed that majority of the respondents were 19-22 years of age group and were pursuing their graduation, belonging to nuclear families and had monthly family income ranged between `10,000-50,000. Eighty seven per cent of the respondents were aware of eco-fashion accessories and 61.11 per cent were interested to reuse the discarded garments whereas 65.55 per cent of the respondents preferred to buy accessories.

Agrawal and Sharan (2015) studied on the majority of textile waste comes from household sources, generally thrown as old clothes. Sometimes even “not so worn garments were also discarded as they become unfashionable or undesirable”. These were termed as post – consumer waste. Textile waste us also produced during yarn and fabric manufacturing processes and from retail industries. These were called post industrial waste.

Adams (2015) reported that H and M launched its Garment Collecting Initiative in 2013 at U.K in which customers from every corner of the world have helped to recycle 25,000 12 tonnes of their unwanted clothes. The brand has been on the sustainability forefront for years. Unwanted items are collected in more than 3,600 H and M stores located worldwide and then they are shipped to one of seven sorting plants where they are sorted to become either fit for re-wearing or sold in second-hand stores, re-used as clothes or upholstery or re-cycled to become new fabric or new items. Their new denim collection is about making overalls and jumpsuits which are very sustainable. It will not only minimize textile waste, but also significantly reduce the need for virgin resources as well as other impacts fashion has on our planet.

Newell (2015) studied on Textile waste resource recovery: A case study of New York state’s textile recycling system Growing amounts of textiles waste in landfills have become a concern for many. This study looked into the existing textile recycling system in New York State that performs the recovery, reuse and recycling of textiles,

and provides alternatives to landfill disposal. This study highlights systemic efficiencies and inefficiencies in textile waste recovery and recycling efforts that can assist in improving diversion efforts and increasing both input and output to the system, in order to reduce textile waste in landfills. Because waste of all kinds is produced in communities locally, the research questions and answers sought to better understand how textiles are processed within the textile recycling system on local and regional levels. Another objective was to understand if and how the United States could become more accountable for the textile waste it produces and decrease dependency on foreign exports of second hand clothing and other textile waste. Research questions were explored and answered through a mixed methodological research design that combined primary qualitative and quantitative data with secondary data. Primary data was gathered from consumers through an exploratory consumer survey on textile disposal behaviors and from interviews with key informants from municipal recycling management, the textile recycling industry, the fashion industry and higher education. Secondary data was reviewed both during the literature review and the data analysis process to triangulate results while answering the research questions. Results from this research indicated that in order to effectively improve landfill diversion of textile waste consumer education and increased participation from the fashion industry are necessary for success.

Kim and Kim (2016) conducted a case study comparing textile recycling systems of Korea and UK to promote sustainability the aim of this study is to review the current textile recycling system of Korea in order to promote and build a sustainable textile recycling system. As fast fashion has changed the climate of the fashion and textile industry across the world, excess consumption is profoundly encouraged and the volume of textile waste has been notably increased. In recent years, Korea has also faced a large volume of textile waste and its related environmental and economic impacts. As a result, recycling practices have become critically important, yet its systems in Korea have not been fully settled as many interconnected problems are raised through the current process. Therefore, case studies are made between the UK and Korea systems, especially waste collection and distribution channels, to review and address the current problems in Korea with the aim of improvement.

Kaur (2016) conducted a study on Designing of one piece dresses from used jeans. The present investigation was undertaken to study the reutilization of old jeans for making one piece dresses. The study was conducted on the college going girls in three different colleges of Punjab Agricultural University. An interview schedule was used for collecting data. Fifteen designs were developed using most preferred silhouettes, type, colour and placement of embellishments in Corel Draw X7. Five most preferred designs by the experts were selected and constructed.

Sharma and Goel (2017) conducted a study on Development of Nonwoven Fabric from Recycled Fibers. Recycling is a way to process, the used materials (waste) into new products to prevent waste of potentially useful materials. Textile waste recycling becomes more important phenomenon; bearing in mind the limited availability of resources to produce natural fibers as well as fossil raw materials to make synthetic fibers. Recycled textile waste can be further converted in the form of fiber for filling, recycled yarn, recycled woven fabric, recycled nonwoven fabrics etc. Therefore the present study has been conducted to prepare nonwoven fabric by using recycled cotton and polyester fibers.

Sandin and Peter (2018) conducted a study on Environmental impact of textile reuse and recycling – A review This paper reviews studies of the environmental impact of textile reuse and recycling, to provide a summary of the current knowledge and point out areas for further research. Forty-one studies were reviewed, whereof 85% deal with recycling and 41% with reuse (27% cover both reuse and recycling). Fibre recycling is the most studied recycling type (57%), followed by polymer/oligomer recycling (37%), monomer recycling (29%), and fabric recycling (14%). Cotton (76%) and polyester(63%) are the most studied materials. The reviewed publications provide strong support for claims that textile reuse and recycling in general reduce environmental impact compared to incineration and landfilling, and that reuse is more beneficial than recycling. In terms of critical methodological assumptions, authors most often assume that textiles sent to recycling are wastes free of environmental burden, and that reused products and products made from recycled materials replace products made from virgin fibers. Examples of other content mapped in the review are: trends of publications over time, common aims and geographical scopes, commonly included and omitted impact categories, available sources of primary inventory data, knowledge gaps and future research needs. The

latter include the need to study cascade systems, to explore the potential of combining various reuse and recycling routes.

2.2 DESIGNING OF UTILITY ITEMS

Bawa (2006) reported a research on creation of handbags for youngsters from waste fabric. Thirty different designs of handbags by taking inspiration from nature were created and 10 most preferred designs were selected for construction of handbags by using jute fabric. The result revealed that the cost of one handbag which was approximately Rs. 200and average selling price of the handbag was calculated after adding 20 percent profit. The consumers appreciated the uniqueness, creativity and workmanship of handbags.

Sasha (2009) reported a research on craft for contemporary living. Durries began life as a poor relation of the carpet, and woven on a simple frame. They were made of cotton and were strictly a utility item, mostly forming the bottom layer of bedding, to make the bed smoother to lie on. They were used as floor covering also, but seldom for aesthetic reasons, as they usually came in rather pedestrian designs. After the partition of India, weavers began using handlooms to make durries, and to experiment with colour and design. Here and there stripes began to give way to floral and geometrical motifs. Stockblues and reds made room for rich Indian colors. Woolen durries began to appear, and gradually the utilitarian durrie became a thing of beauty as well. The chindi durrie, or rag rug, is a relatively new type of durrie on the Indian market. Probably the creation of some thrifty householder, it was originally made from scraps of old apparel, using stout cotton thread as the “warp”. Cotton still forms the warp, but the scraps have long since changed character and in our durries the wevers use recycled silk.

Sujata (2009) developed value added articles using block, mosaic and crazy patch works in combination with quilting technique to design deferent value added utility articles viz. baby quilts, table runners, table mats and magazine holders. Patch work enhanced and retained the traditionalist of quilt making rural and urban consumers were asked to express their acceptability for patch work quilt value added articles. Both rural and urban consumers highly accepted mosaic of quilt value added articles because of their striking three dimensional effects and pleasant colour combinations.

In a study by Roy and Basu (2010) stated that jute fibres have been used for development of high value utility products like school bag and laptop bag. For this specialty jute yarns have been developed which have 27 per cent higher load bearing capacity and more than 90 per cent reduction in hairiness than the conventional jute yarns. The fabrics were developed with different weave structure for the fabrication of the products when compared with ordinary jute fabric of similar constructional parameters, show higher strength and elongation and drastic reduction of bending modulus resulting in softer feel, which also helps in easy folding of fabric while stitching.

Bhati (2010) in the study on Development of bonded fabric using non-biodegradable waste for developing consumer products developed bonded fabric of 200-300 GSM developed value added articles like suitcase cover, computer cover, baby set, fridge cover, table mats and other utility articles. All the developed articles were found very usefull and appreciated by all subjects.

Kumawat (2010) in the study 'Value addition of khadi Bed linen and assessment of its market potential' concluded that the designs layout used on less width, khadi fabric for bed linen were highly appreciated by the respondents as cost of developed bed linen was found very reasonable and has good market potentials. Thus, the developed value added khadi bed linen, being inspired from modern computerized machine embroidery was found exclusive and unique by the respondents.

Nayak *et al.* (2012) in a study on conversion of jute caddies (jute mill waste) into value added products reveal that jute caddies can be used as cellulosic raw material for production of bio gas and composites. The non woven made out of jute caddies can replace glass fiber as reinforcing material in composites for making various utility items. Handmade papers for various applications can be prepared from jute caddies.

Babel *et al.* (2012) studied on developed value added articles using goat hair fiber. Macrame knot technique was used for development of articles. By scoring and ranking method the top ten ranked articles were developed viz. telephone mat, belt, bottle cover, festoon, jhula key ring, magazine holder and pot holder. Developed articles by the use of goat hir and macramé knot were found totally unique and innovative by all respondents.

Bala (2012) conducted study on "Diversification of handmade carpets of panipat". Carpet found in market were embellished with printing and combination of printing and aplique. The most preferred products for diversification were prayer chowki cover, muda cover, prayer mat, stool mat, telephone mat, foot mat, file cover, wall pocket, teddy bear and belt developed. The top ranked designs and handmade techniques of each product were used for development of selected diversified products. Stool mat, belt, prayer mat, prayer chowki cover, muda cover were highly acceptable in terms of utility. The cost of products was found appropriate by the consumers for teddy bear, belt file cover, wall pocket, stool mat, muda cover and telephone mat.

Lodha (2013) in the study on Entrepreneurship development through Niwar products among prisoners of Udaipur concluded that the study was an innovation in making different attractive and useful niwar products which were never seen in the market before. It is a way to create a new innovation from niwar which was not much utilized. It will prove a bright future in field of handicraft and can be used as an entrepreneur by using it in products for utility and decorative purpose.

Islam and Khan (2013) revealed in Functional Properties Improvement and Value Addition to Apparel by Soil Release Finishes that apparel with desired functional and aesthetic properties has an evergreen demand among the consumers globally. Unless any product is characterized by value addition, it is now impossible to survive in this highly competitive world market. Only innovative products will be sustainable to open up new markets and new horizons for textile industry. Manufacturers should now produce products to satisfy customers that are best in terms of quality and price. Customers today have a wide range of choices and the one who produces the best quality at a better competitive price will survive and prosper. Processing is important to make a usable but finishing gives better characteristics and value addition to it. It makes garments attractive, comfortable and finishing can incorporate desirable properties.

Soni and Soni (2014) developed ten most preferred utility hand bags out of forty designs with reverse applique method using fabric such as voile, poplin, muslin and organdie eco-friendly materials were used for ornamentation such as laces and cords, beads and rings of different shape and sizes after construction cost evolution was done

and begs were tested for their market potential and they were highly appreciates by respondents.

Swami (2014) conducted a study an development of diversified products using chokla wool. Researcher developed products i.e. lower waist belt, upper back supporter, knee pad, chest warmer pad, ear mufs and wrist belt. Researcher also assessed the suitability using five point preference rating scale. All products were highly appreciated by all respondents for their uniqueness and usefulness.

Kaur and Kaur (2015) The investigation entitled development of jewellery from solid waste was carried out in Ludhiana city. The data was collected from 90 respondents between the age group of 17-25 years through purposive random sampling from three colleges of Ludhiana city. Majority of the respondents, *i.e*. 87.78 per cent were aware of jewellery developed from solid waste and 64.44 per cent were interested to reusing in whereas, 66.67 per cent of the respondents were interested in purchasing jewellery. Most of the solid waste was collected by the investigator.

Gupta and Gupta (2016) reported a study on Development of textile products from post consumer waste. Indian textile industry is not only the oldest industry in the country but also one of the major industries providing employment and fetching foreign exchange for country. It caters to the most essential consumer needs such as draperies, carpets, rugs and other textile products. While the textile industry has a long history of being thrifty with its resources, a large proportion of unnecessary waste is still produced each year. Therefore research work is necessary in this field to demonstrate the potential viability of innovative application of waste fabric for the development of textile products from post consumer waste. For the study, waste fabrics were collected from pilibhit, districts. Total three product were developed from waste fabric then consumer acceptability were assessed and found that majority of the respondents preferred the developed products.

2.3 SKILL DEVELOPMENT THROUGH TRAINING PROGRAMME

Bharti (2011) conducted a study on Skill development among rural women for establishing micro enterprise through development of products using Chindi Durrie weaving technique that the study refers to the objective of existing knowledge and identify the training needs of rural women in the area of Durrie weaving and micro enterprises based on Chindi Durrie weaving. An intervention information package

was developed for imparting training to rural women. Impact of training was assessed through developed products on information empowerment of rural women in terms of skill development.

Rahman *et al.* (2012) conducted a study women empowerment through the preparation of jute diversified products and efficient marketing. Under this study organized training programs for rural women. The jute fiber produced in the village was utilized for preparing different handicraft items. Seven days training programs for 30 trainees in each comprising of rural women and school dropout girls were organized at different village to prepare diversified handicraft from jute fiber. Then most of trainees formed self-help groups of Mahila mandal started preparing different items from fiber where they found good acceptance of their products in different agricultural fairs, exhibitions and shops. These help the rural women and youth giving some additional income and empowering the weaker section of rural folk and increase the small scale industries in the particular area. Thus, the small entrepreneurs have not only attached but have also opened cheaper options for the poorer section of the society living in different terrain.

Chutia and Bhuyan (2014) Rural women are endowed with invaluable talent of weaving masterpieces on textiles. They effortlessly infuse their creativity into weaving colorful pieces for near and dear ones. In spite of this abundant creativity, entrepreneurship among rural women seems to be very limited. Except for a few, majority of the village women take home-weaving as a way of life and never wish to take up this latent talent as a full time occupation for making economic gains. Different researchers from time to time have made multitudinous studies on problems faced by rural women during entrepreneurial activity. Realizing the criticality of the issue related to weaving ability and entrepreneurship, this study aims to discuss the implicit issues related to women entrepreneurship among women weavers in village settings of Assam. The paper utilizes empirical as well as interpretive investigation at Balisiha Kachari, Bahbari Bagicha and Ghatua Chuburi villages in Sonitpur district of Assam. Secondary background information related to the problems faced by women entrepreneurs is conducted through literature survey. Beside the information availed through different research work on demotivating factors for entrepreneurial ventures among women, an attempt is also being made to identify artistic skills among women as one of the factor to understand their level of confidence in their creative ability and

thus their inclination to create a living out of it. Findings of this study reveal that confidence on designing and weaving skills and desire to start a weaving venture is related.

Verma (2015) conducted a study on Challenges of skill development and rural women entrepreneurship. Women have been regarded as the nuclei of a nation and the builder and moulder of its destiny. The position and status of women in any society is an index of civilisation. In 2011, out of total population of India, females representing 48.46 per cent. Though women form half of the Indian populations; their productive work is not officially allocated for one third of the total labour force. The literacy rate among women has increased from 54.28 per cent in 2001 to 65.46 per cent in 2011. This is positive sign for the development of women entrepreneurship. The women of today have the capability to analyse, organize and mobilize the surrounding situation for social transformation. Because of participation in social activities, leadership qualities and technical skills are developing in women. Of late, service sector has played a significant role in providing employment opportunities to women. Besides, lot of measures have been taken to promote women entrepreneurship in urban, semi-urban areas. But it is observed that women from the rural background can establish business units in those areas where they have core competency. Rural women need more avenues of skill development to prove their competency in the areas of entrepreneurship such as cottage industries, handicrafts making etc. Women who do not feel comfortable to work in their houses, uses their core competency by becoming entrepreneurs. The present study is based on the secondary data with regard of need of women's skill development. An attempt has been made to know what are the hurdles which rural women face to achieve skill development at all fronts.

Babel and Sharma (2016) reported a study on Impact of skill development training among rural women for entrepreneurship development. The present study was undertaken with objective to develop an intervention package for skill development, to impart training among rural women for entrepreneurship development and to assess the effectiveness of training. A purposive random sample of 30 respondents was selected from Griva Tehsil of village Badgaon, Udaipur district of Rajasthan Skill training was imparted at their own village. Majority of respondents belonged to the age group of 20-30. The five value added jute article selected by the respondents were belt, phone mat, book holder, photo frame and jute painting out of

list of 20 jute article for training. Eight days skill development training programme was organized and demonstration method was used.

Karrware (2017) skills and knowledge were the driving forces of economic growth and social development of any country. The economy becomes more productive, innovative and competitive through the existence of more skilled human potential. The focus in the last few years has been to build the capacity of SHGs realizing the fact that these were in a more advantageous position to combine their resources and talents for enabling viable income generating activities, as compared to alone individual ‘s efforts. If the current situation was any indication then there were very few job ready workers available in the market. So, it was not only the growing young workforce that needs to be trained with the market survey skills but also the middle-aged who lack the require competency to move up the ladder of growth. When these individuals are up-skilled in the current economic space their chances of acquiring better employment opportunity increase. A formal assessment of the available skills and required skills in craft traditions help to incorporate the result in the training curriculum which can also form a part of National occupation standards (NOS). The skill gap study would help to improve existing skills, add missing ones and design better support frameworks for future requirement of the skill.

METHODOLOGY

The present investigation was undertaken to study the utilization of used textile for making utility items. Keeping in mind the objectives of investigation, a suitable methodology to conduct study in a scientific manner was adopted. To facilitate the comprehension of the discussion, the methodology has been categorized in the following categories:

3.1 Locale of the study

3.2 Selection of the sample

3.3 Development of tool

3.4 Data collection

3.5 Analysis of data

3.1 Locale of the study

Savina Kheda village of Girva Tehsil of Udaipur district in Rajasthan was selected and pre- tested. Hence, Savina Kheda village was selected for the present study to impart skill development and knowledge awareness.

3.2 Selection of the sample

a) Selection criteria: For the present investigation various samples were drawn out at different level. The study was complied in three main parts including survey, development of intervention package and training.

A sample of 30 rural women in the age range of 18-40 years were randomly selected from village (Savina Kheda) of Udaipur. The structured interview schedule had questions regarding the socio-personal background of the respondents. Who have interest and knowledge about stitching and willing to attend the training were selected through purposive random sampling technique. The sample was selected by doing a preliminary survey of rural areas under following attributes:-

- Prevalence of self employment among rural women.
- Willingness of rural women to adopt entrepreneurial activities.
- Interest of women in making utility items.

b) Selection of panel of experts: Five experts of Textile and Apparel Designing were selected to evaluate the developed booklet on utilization of used textile.

3.3 Development of tool

On the basis of objectives of the study one structured interview schedule, one rating Performa and skill assessment test was developed by researcher.

a) Structured interview schedule

b) Rating performa

c) Skill assessment test

a) Structured interview schedule

A structured interview schedule was developed by the researcher to explore the knowledge among rural women about the reuse of used textile. It consisted of open and close ended questions.

- **Background information:** To find out the basic information, this part included questions dealing with the background information i.e. name, age, caste, education level, occupation, type and size of family, house and land, source of information, etc.
- **Knowledge about utilization of used textile:** This part included questions reflecting their interest and existing knowledge about utilization of used textile, stitching, making utility items.

b) Rating Performa:

A booklet was developed on utilization of used textile by the researcher and was evaluated by five experts experienced in the field of Textile and Apparel Designing**.** One rating Performa was developed for evaluation of developed booklet. The booklet was rated on five continuum basis i.e. excellent, very good, good, moderate and poor on the basis of following categories**:**

- Language
- Visuality
- Photograph
- Subject matter
- Effectiveness
- Clarity

c) Skill Assessment test:

This test was used to find out the impact of training provided as well as to assess the skill developed. In this, different steps involved in making products through utilization of used textile was listed out. Shopping bag, Sling bag, Mobile cover, Multi-purpose wall hanging and Saree cover Trainess were asked to make that product. For evaluation purpose following criteria was used.

- Each and every right step will be given 1 mark.
- Each and every wrong step will be given 0 mark.

3.4 Data collection

For the present study data collection comprised of following steps:-

Step- 1

Selection and Survey of rural women

Researcher made direct contact to 30 rural women who were residing in the village of Savina Kheda village of Udaipur district of Rajasthan. The researcher collected desired information by using structured interview schedule.

Step- 2

Development of utility items

The researcher prepared 5 items from used textile using different techniques:

- **Items**– Shopping bag, Sling bag, Mobile cover, Multi-Purpose wall hanging and Saree cover.
- **Technique** – Stitching, Hand embroidery, Quilting, Patch work and Applique work.
- **Development of booklet-** The researcher developed a booklet showing various steps involved in making these five utility items from used textile.

Step 3

Organization of training program and assessment of skill development

- **Training programme**

On the basis of interest and data gathered through preliminary survey from rural women, the training package was developed and delivered to rural women by the researcher**.** A 15 day training programme was organized at Savina Kheda village,

near Udaipur everyday for 2 hours. In this training programme the target group was 30 rural women.

- **Assessment of skill developed after training**

To assess the impact of training, the researcher administered the Skill Assessment Test on the selected women. The researcher demonstrated development of utility items from used textile through training programme. This training programme was of 15 days. Researcher taught preparation of 5 utility items using used textile in the first 10 days of training programme. At the end of training programme, researcher took their skill assessment test and women made five utility items. Each and every right step was given 1 mark and each and every wrong step was given 0 marks. After that researcher analyzed marks and categorized in 3 rank order i.e. excellent (above 75%), very good (60-75%) and fair (below 60%).

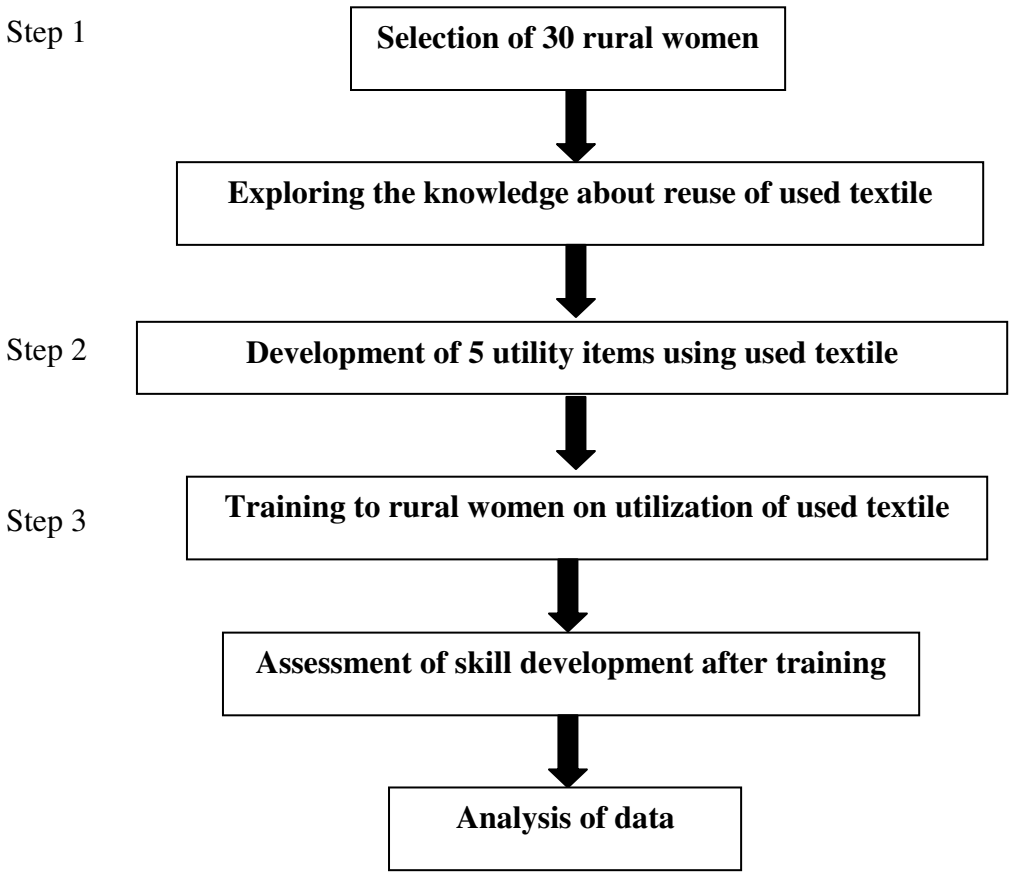

Fig 1 Flow chart for plan of work

Training schedule

Date/Time	Topic	Content	Method	Material Required
1st October Monday 2.00 pm to 4.00 pm	Introduction about utilization of used textile for utility items.	Informal conversation with rural women	Lecture	-
2nd October Tuesday 2.00 pm to 4.00 pm	Introduction about Stitching, Hand embroidery, Quilting, Patch work and Applique work.	Informal conversation with rural women	Lecture and Discussion	-
3rd October Wednesday 2.00 pm to 4.00 pm	Shopping bag	Steps involved in making bag (cutting and stitching)	Demonstration	Old jeans, sewing machine, scissors, measuring tape, needle, thread, chalk.
4th October Thursday 2.00 pm to 4.00 pm	Shopping bag	Steps involved in making bag (embellishment through hand embroidery and patch work)	Demonstration	Scissors, embroidery thread, printed cloth, needle.
5th October Friday 2.00 pm to 4.00 pm	Sling bag	Steps involved in making bag (cutting and stitching)	Demonstration	Old cloths, foam sheet, zipper, sewing machine, scissors, measuring tape, needle, thread, chalk.
6th October Saturday 2.00 pm to 4.00 pm	Sling bag	Steps involved in making bag (embellishment through applique)	Demonstration	Embroidery thread, printed cloth, scissors, needle.
7th October Sunday 2.00 pm to 4.00 pm	Mobile cover	Steps involved in making mobile cover and embellishment	Demonstration	Old jeans, printed cloths, embroidery threads, lace, Velcro, needle, scissors, thread.
8th October Monday 2.00 pm to 4.00 pm	Multi-Purpose wall hanging	Steps involved in making Multi-Purpose wall hanging and Embellishment	Demonstration	Old jeans, printed cloths, needle, scissors, measuring tape, chalk, canvas, thread.

9th October Tuesday 2.00 pm to 4.00 pm	Saree cover	Steps involved in making saree cover (cutting and stitching)	Demonstration	Old fabric, foam sheet, zipper, sewing machine, scissors, measuring tape, needle, thread, chalk.
11th October Thursday 2.00 pm to 4.00 pm	Saree cover	Steps involved in making saree cover embellishment through hand embroidery and patch work	Demonstration	Embroidery thread, printed cloth, scissors, needle.
12th October Friday 2.00pm to 4.00 pm	Skill test and evaluation of Shopping bag	Skill assessment Test	-	-
13th October Saturday 2.00 pm to 4.00 pm	Skill test and evaluation of Sling bag	Skill assessment Test	-	-
14th October Sunday 2.00 pm to 4.00 pm	Skill test and evaluation of Mobile cover	Skill assessment Test	-	-
15th October Monday 2.00 pm to 4.00 pm	Skill test and evaluation of Multipurpose wall hanging	Skill assessment Test	-	-
16th October Tuesday 2.00 pm to 4.00 pm	Skill test and evaluation of Saree cover	Skill assessment Test	-	-

***On 10th of October, Wednesday, training could not be done, as women were busy on the occasion of Navratri Sthapana.**

3.5 Analysis of data

The data was analyzed through following methods.

- **Categorization:** When the data was collected, they were categorization was done in order to make coding simpler.

- **Coding:** After Categorization, coding was done as per the determine code characteristics for response through coding sheet.
- **Tabulation:** The coded data was decoded by transforming it from code sheet to comprehensive table.
- **Frequency and percentage**: Frequency and percentage were used to analyze background information and knowledge of respondents before training, after training and 15 days of training.
- **Mean:** The mean for a data set, the mean is the sum of the observations divided by the number of observations. It identifies the central location of the data, sometimes referred to in English as the average. The mean was calculated using the following formula.

$$M = \Sigma(X)/(N)$$

Where **Σ** = Sum of X = Individual data point N = Sample size

- **Mean percent scores**: Scores obtained by the respondent in the knowledge test were converted in MPS to have uniformity in the scoring of different utility items.

$$\mathbf{MPS} = \frac{\textbf{Sum of scores obtained}}{\textbf{Maximum score obtained}} \text{ X } 100$$

RESULTS AND DISCUSSION

In this chapter, the study sets forth clearly and precisely the findings and interpretation in the context of major objectives of the study, thus providing a bird's eye view of the complete study which makes this section the most significant and crucial part of the research work.

The results obtained from the analysis of the data of the present investigation has been presented. The data have been organized and analyzed taking into account the objectives of the study. The result have been presented under the following heads.

4.1 Background information of the respondents

4.2 Existing knowledge and practices of rural women in different components of utilization of used textile

4.3 Designing of training package

4.4 Evaluation of training package by experts

4.5 Implementation of training programme

4.6 Assessment of skill development among rural women

4.1 Background information of the respondents

The 30 respondents were studied for their age, education, family occupation, monthly income of the family, status, family type etc. The frequency and percentage distribution of respondent are given in tables and discussed briefly.

Table 1: Background information of the respondents

n = 30

S. no.	Aspects	Categories	F	Percent (%)
1	Age	18-22	8	26.67
		23-28	8	26.67
		29-40	14	46.66
2	Marital status	Married	22	73.33
		Unmarried	4	13.33
		Widow	3	10
		Divorcee	1	3.34
3	No. of children	No children	6	20
		1-2 children	17	56.67
		More than 2 children	7	23.33
4	Family type	Nuclear	17	56.67
		Joint	8	26.67
5	Family income	1000-10,000	17	56.67
		10,000-20,000	8	26.67
		More than 20,000	5	16.66
6	Socio & Economic status (caste)	SC/ST/SS	22	73.34
		OBC	5	16.66
		General	3	10
7	Socio & Economic status (family business)	Dairy and farming	8	26.67
		Job	10	33.33
		Own business	12	40

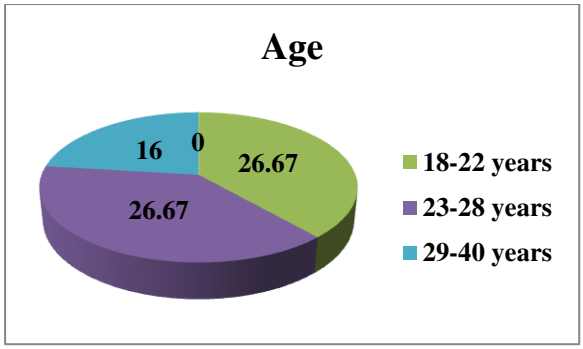

Figure 1: Percentage distribution of age

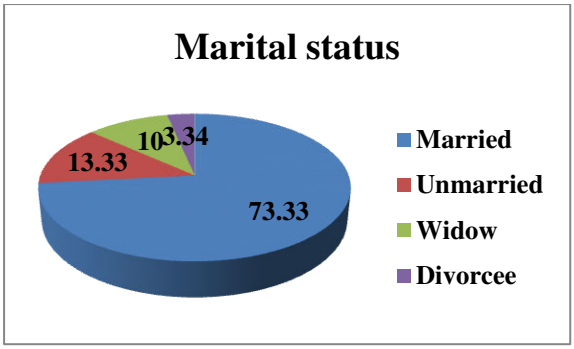

Figure 2: Percentage distribution of marital status

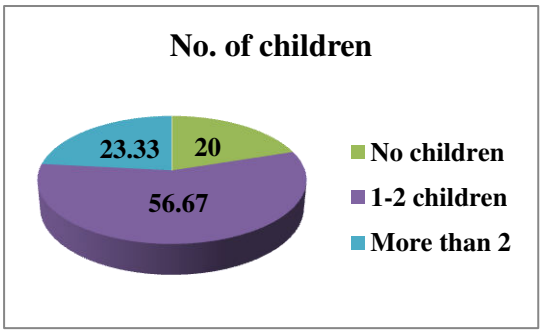

Figure 3: Percentage distribution of no. of children

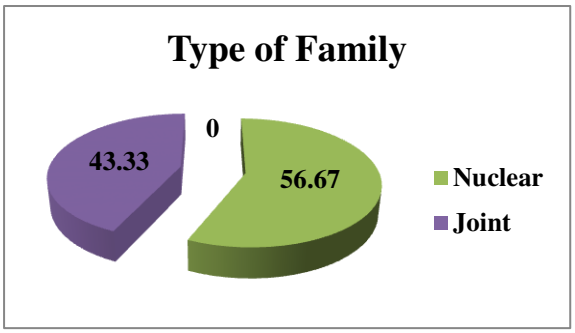

Figure 4: Percentage distribution of types of family

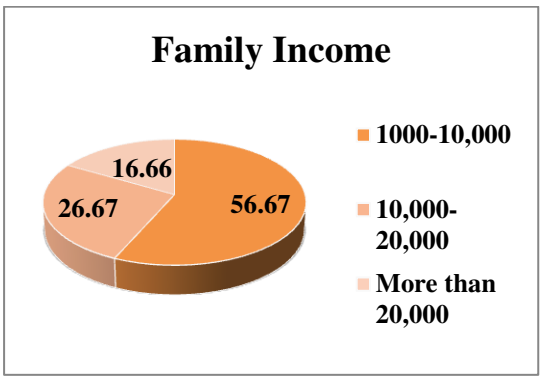

Figure 5: Percentage distribution of family income

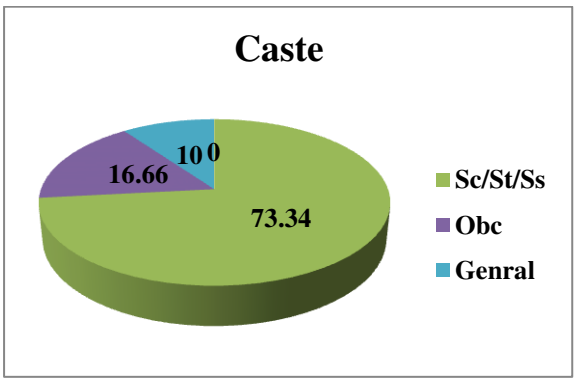

Figure 6: Percentage distribution by caste

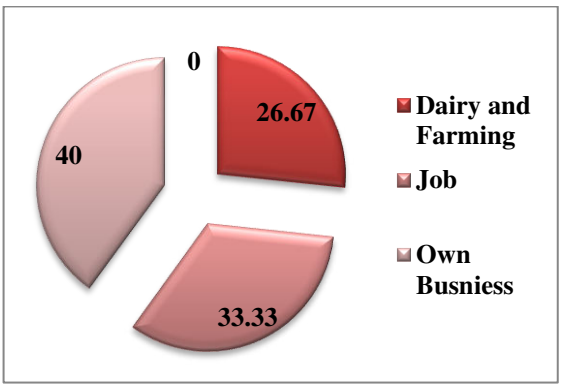

Figure 7: Percentage distribution of family occupation

Table1and Figures (1-7) shows that (46.66%) respondents were in the age range of 29-40 years. Majority of respondents (73.33%) were married and belonged to SC/ST/SS caste. 56.67 percent respondents had 1-2 children and belonged to nuclear family. Income range was found to be Rs. 1000-10,000/- per month. Forty percent respondents were engaged in own business.

Table 2: Background information of the respondents

n = 30

S. no.	Aspects	Categories	F	Percent (%)
1	Education level	Uneducated	12	40
		Middle level	8	26.67
		High school	5	16.67
		Graduate	3	10
		Post graduate	2	6.66
2	Land	No land	7	23.33
		Less than 4 acer	13	43.33
		5-9 acer	6	20
		More than 9 acer	4	13.34
3	Type of houses	Kuccha	2	6.66
		Mixed	6	20
		Pakka	22	73.34
4	Source of information	Television	12	40
		Radio	5	16.66
		Film	4	13.34
		Newspaper	6	20
		Exhibition	3	10

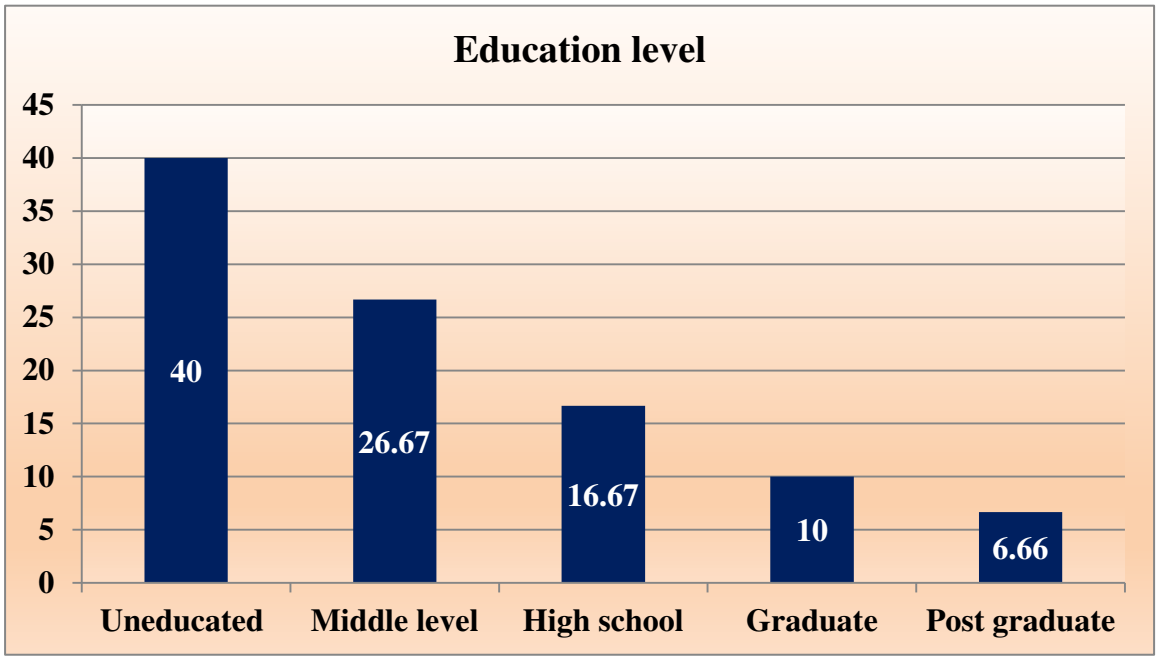

Figure 8: Percentage distribution of respondents by Education level

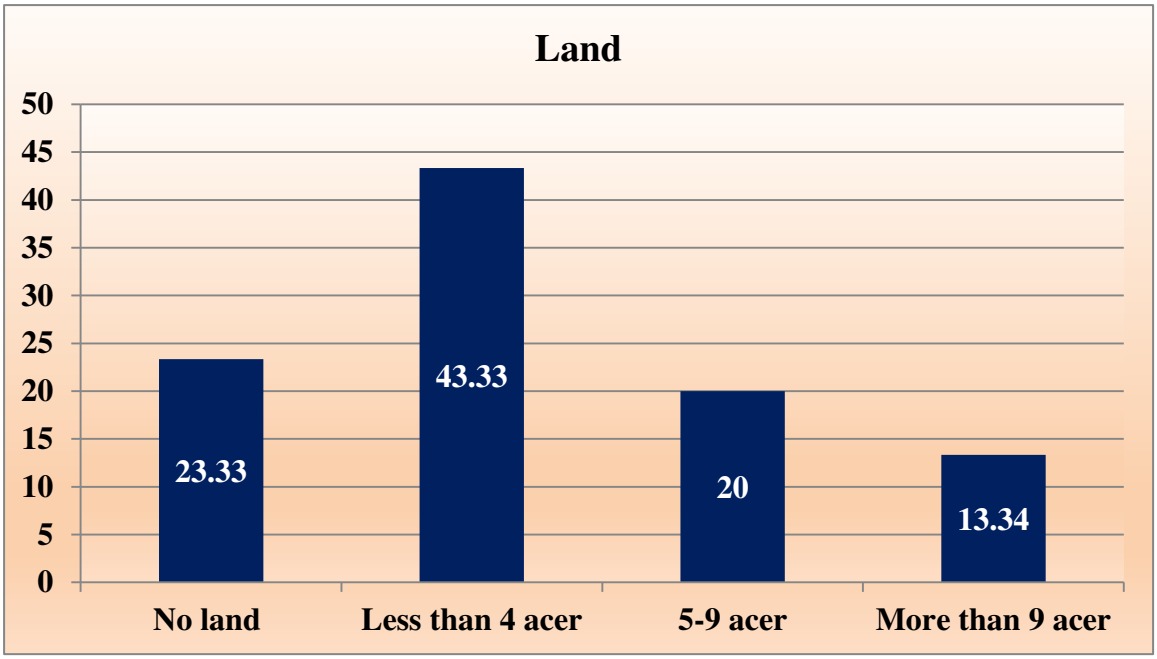

Figure 9: Percentage distribution of respondents by Land holding

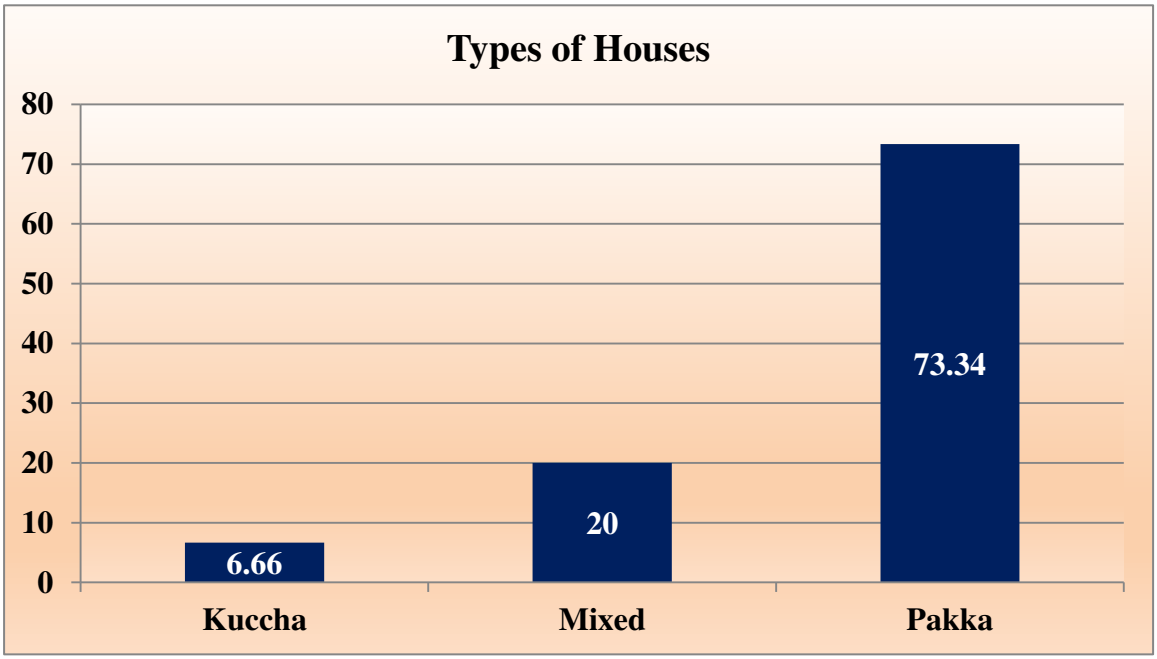

Figure 10: Percentage distribution of respondents by types of houses

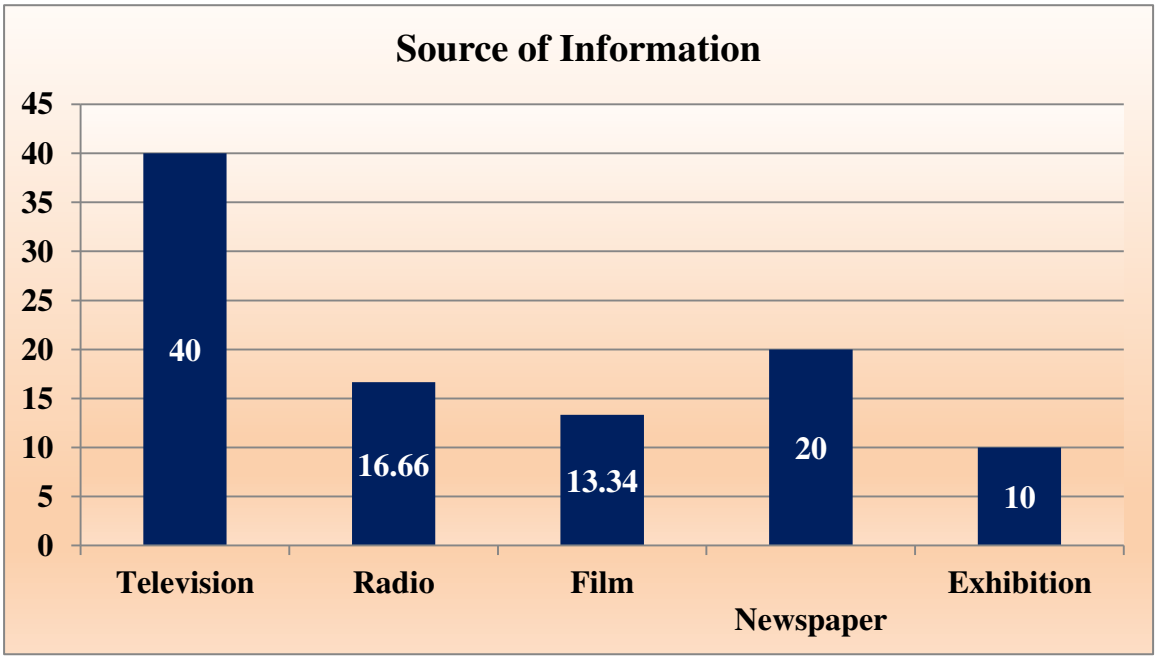

Figure 11: Percentage distribution of respondents by source of information

Table 2 and figures (8-11) shows that 73.34 per cent respondents were having pakka houses, 43.33 percent respondents have less than four acer land and 40 per cent respondents were uneducated and they use television as a source of information.

4.2. Existing knowledge and practices of rural women in different components of utilization of used textile - The percentage distribution of respondents by Existing knowledge and practices of rural women in different components of utilization of used textile has been shown in Table 3.

Table 3: Depicts the frequency and percentage distribution of existing knowledge and practise of rural women **n = 30**

S. No.	Aspects	Frequency		Percentage	
		Yes	No	Yes	No
1.	Knowledge about utilization of used textile	13	17	43.33	56.67
2.	Are you doing any business	18	12	60.00	40.00
3.	Do you want to have any other source of income	26	4	86.66	13.34
4.	Do you want to start your own business	28	2	93.34	6.66
5.	Have you taken any training regarding this topic	18	12	60.00	40.00
6.	Do you want to take training	30	0	100.00	0
7.	Do you have knowledge about stitching	28	2	93.34	6.66
8.	Will you give enough time for training	30	0	100.00	0
9.	Do you have knowledge about how to make utility items from used textile	21	9	70.00	30.00

Table 3 shows that 100 percent were ready to give enough time for the training programme, respondents were interested in training and they want to take training, among which 93.34 per cent of respondents have knowledge about stitching and want to start their own business, 86.66 per cent of respondents want to have another source of income, 70 per cent respondents have knowledge about how to make utility items through used textile and 43.33 percent of respondents have knowledge about utilization of used textile.

Bharti (2011) found that Skill development among rural women for establishing micro enterprise through development of products using chindi durrie weaving technology cent percent of respondents not aware about chindi durrie weaving.

4.3. Designing of training package

As per the objectives, an training package (booklet) entitled “Development of Products by Utilization of used textile” was developed by the researcher. Shopping bag, Sling bag, Mobile cover, Multi-purpose wall hanging and Saree cover were made by researcher (as shown in plate) and method was shown step by step with appropriate photograph.

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Shopping bag

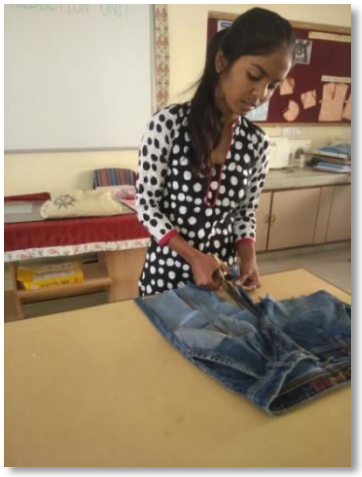
Sling bag

Saree cover

Multi purpose wall hanging

Mobile cover

Plate 1 : Utility Items



Fabric cutting

Cutting of foam piece

Finishing by piping

Hand embroidery

Attaching a zipper

Plate 2 –Items making in lab by researcher

4.4. Evaluation of Training Package by experts

The developed booklet was rated by a panel of five experts on a five point rating scale ranged from "Excellent" to "Poor". The aspects which were included for evaluation were language, visuality, photograph, subject matter, effectiveness and clarity. A description of mean score of overall evaluation of the booklet has been given in the table.

Table 4: Percentage distribution of experts by evaluation of booklet **n=5**

S.No.	Criteria of Evaluation	Percentage (%)
1.	Language	86.40
2.	Visuality	84.80
3.	Photograph	90.40
4.	Subject Matter	88.80
5.	Effectiveness	84.00
6.	Clarity	89.60
7.	Over all	86.40

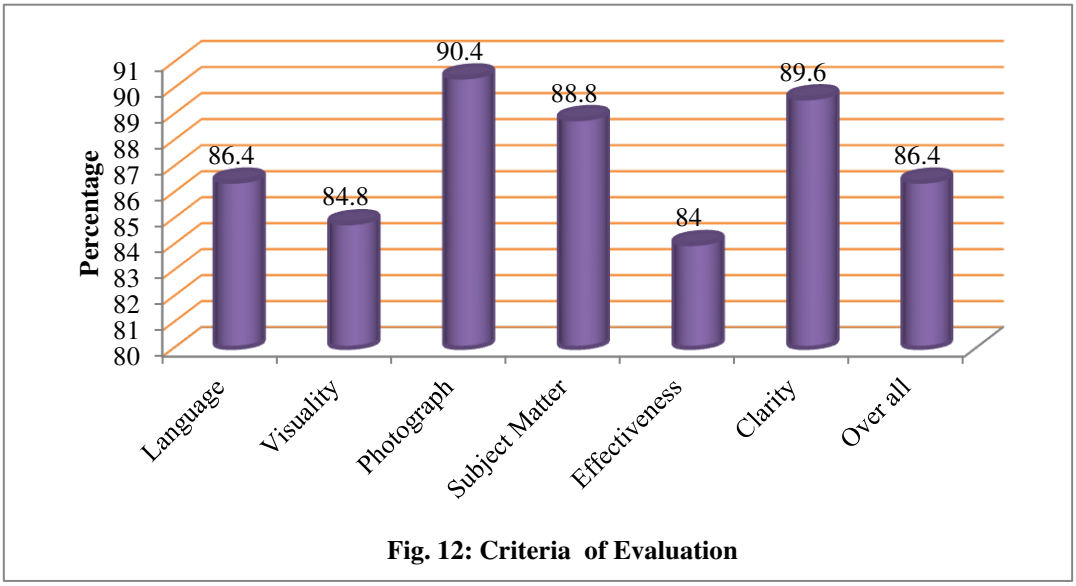


Fig. 12: Criteria of Evaluation

Table 4 and figure 12 shows that panel of experts gave maximum score (90.40%) to photographs, 89.60 per cent gave for booklet clearity, 88.80 per cent gave for subject matter, 86.40 per cent gave for booklet language and overall appearance, 84.80 per cent for visuality and 84 per cent for booklet effectiveness.

4.5. Implementation of training

A training was given to the rural women respondents at the place decided by the researcher "Savina Kheda" nearby Udaipur for a period of 15 days.

First 10 days – Training programme

Last 5 days – Skill assessment test





Plate 3 – Imparting training by researcher in village

4.6. Assessment of skill development among rural women

To assess the skill development among rural women, the researcher asked to women to make the utility items stepwise. For every right step researcher gave 1 mark and for every wrong step 0 mark.

Table 5: Percentage distribution of respondents by Skill in developing Shopping Bag **n = 30**

S. No.	Steps involves in shopping bag	Marks	Per cent (%)
1.	Measurement of bag length and width	30	100
2.	Cutting fabric	30	100
3.	Stitching of shopping bag	28	93.33
4.	Neatness in patch cutting	29	96.66
5.	Pasting patch	28	93.33
6.	Neatness in hand embroidery	28	93.33
7.	Finished product	27	90

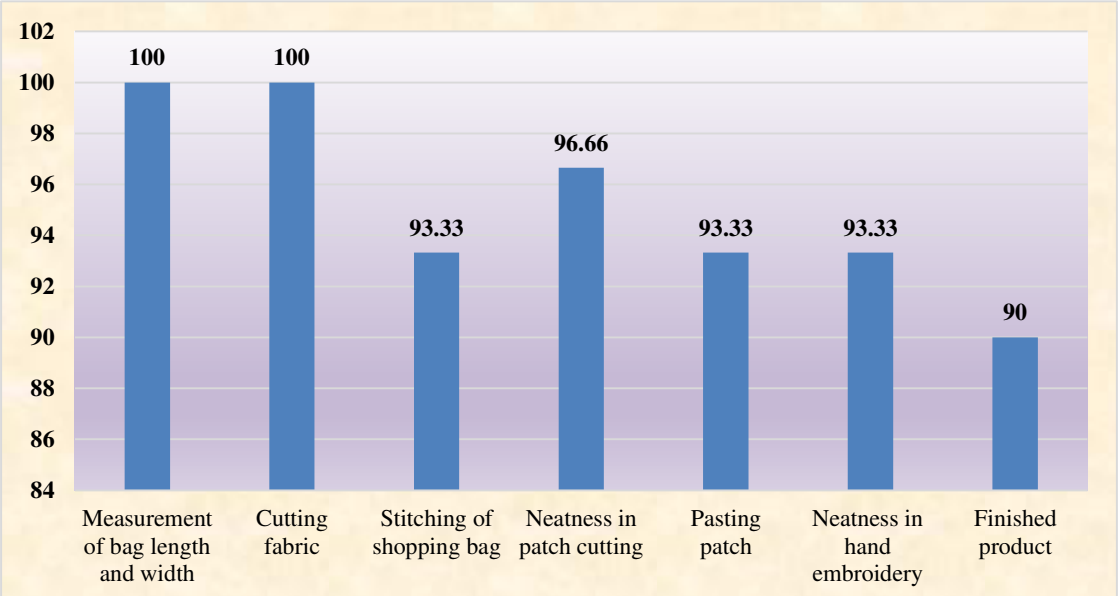


Figure : 13 Percentage distribution of respondents by Skill in developing Shopping Bag

Table 5 and Figure 13 depict skill development of rural women regarding shopping bag. It was observed that respondents were 100 per cent well versed with measurement and cutting whereas (96.66%) of respondent were good in patch cutting. 93.33 per cent got a skill of stitching, pasting and neatness in hand embroidery and 90 per cent were good in finishing.

Lodha (2013) concluded in an Entrepreneurship development through Niwar products among prisoners of Udaipur that 93.33 percent respondents were able to do stitching, edge finishing, use of accessories, finished the product with neatness after training.

Table 6: Percentage distribution of respondents by Skill in developing Sling Bag

n=30

S. No.	Steps involves in sling bag	Marks	Per cent (%)
1.	Measurement of bag length and width	30	100
2.	Cutting fabric	30	100
3.	Cutting of lining and foam for quilting	28	93.33
4.	Neatness in quilting	28	93.33
5.	Stitching of sling bag	27	90
6.	Neatness in zipper attaching	27	90
7.	Neatness in appliqué work	27	90
8.	Neatness in hand embroidery	28	93.33
9.	Finished product	30	100

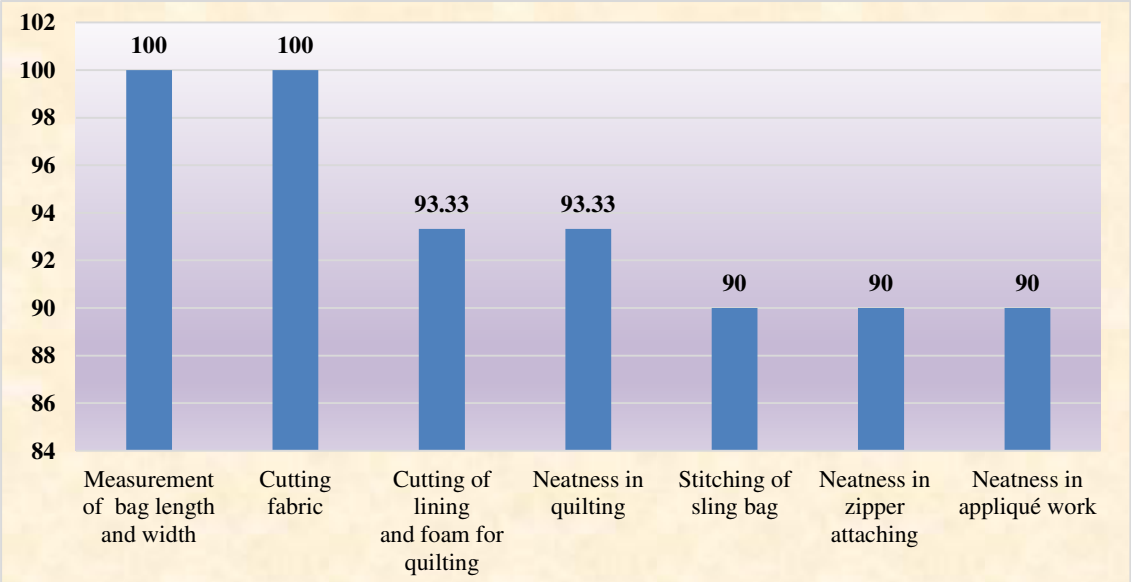


Figure 14: Percentage distribution of respondents by Skill in developing Sling Bag

Table 6 and Figure 14 depict skill development of rural women regarding sling bag. It was observed that respondents were 100 per cent well versed with measurement and cutting. Some of respondent 93.33 per cent were good in cutting of lining and foam for quilting, neatness in quilting and hand embroidery and 90 per cent respondent were good in stitching, neatness in zipper attaching and appliqué work.

Table 7: Percentage distribution of respondents by Skill in developing Mobile Cover

n=30

S. No.	Steps involves in mobile cover	Marks	Per cent (%)
1.	Measurement of length and width	28	93.33
2.	Cutting fabric	30	100
3.	Stitching of mobile cover	29	96.66
4.	Finishing by piping	30	100
5.	Attaching of Velcro and lace	28	93.33
6.	Neatness in hand embroidery	28	93.33
7.	Finished product	30	100

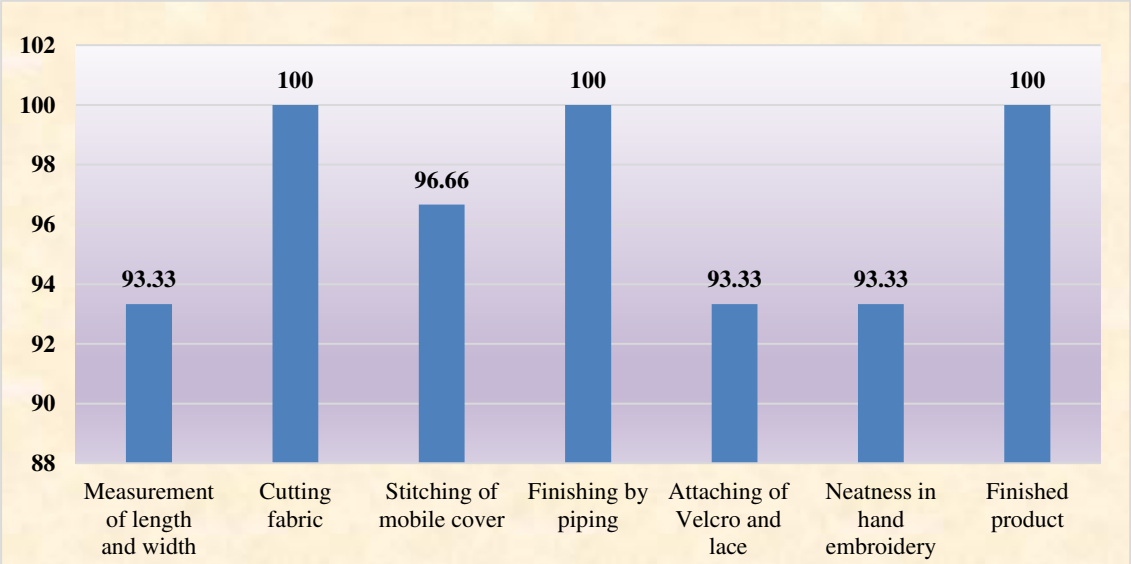


Figure 15: Percentage distribution of respondents by Skill in developing Mobile Cover

Table 7 and figure 15 revels that cent per cent of respondent were good at cutting fabric, finishing by piping and finished product, whereas 96.66 respondent acquired knowledge in stitching, rest of 93.33 per cent respondent learned measurement making, attaching of Velcro, lace and neatness in hand embroidery.

Table 8: Percentage distribution of respondents by Skill in developing Multipurpose Wall Hanging

n=30

S. No.	Steps involves in multipurpose wall hanging	Marks	Per cent (%)
1.	Measurement of length and width	29	96.66
2.	Cutting lining fabric and main fabric	28	93.33
3.	Stitching of multipurpose wall hanging	30	100
4.	Finishing by piping	26	100
5.	Making fabric flower	29	96.33
6.	Neatness in attaching fabric flower	28	93.33
7.	Finished product	30	100

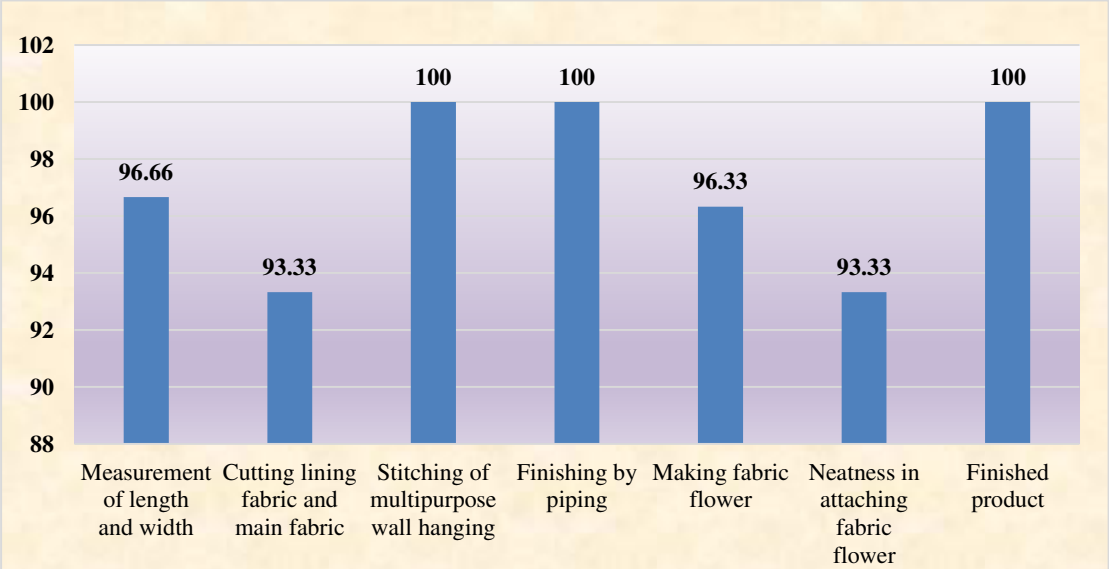


Figure 16: Percentage distribution of respodents by Skill in developing Mulitpurpose Wall Hanging

Table 8 and Figure 16 shows that cent per cent respondent were good in stitching, piping and finished product, nearly 96.66 per cent of respondent learned measurement, making fabric flower and rest of the respondents (93.33%) got a skill of attaching fabric flower.

Table 9: Percentage distribution of respondents by Skill in developing Saree Cover

n=30

S. No.	Steps involves in saree cover	Marks	Per cent (%)
1.	Measurement of length and width	29	96.66
2.	Cutting fabric	30	100
3.	Cutting of lining and foam for quilting	29	96.66
4.	Neatness in quilting	28	93.33
5.	Stitching of saree cover	29	96.66
6.	Neatness in zipper attaching	26	86.66
7.	Neatness in patch cutting	28	93.33
8.	Pasting patch	28	93.66
9.	Neatness in hand embroidery	29	96.66
10.	Finished product	30	100

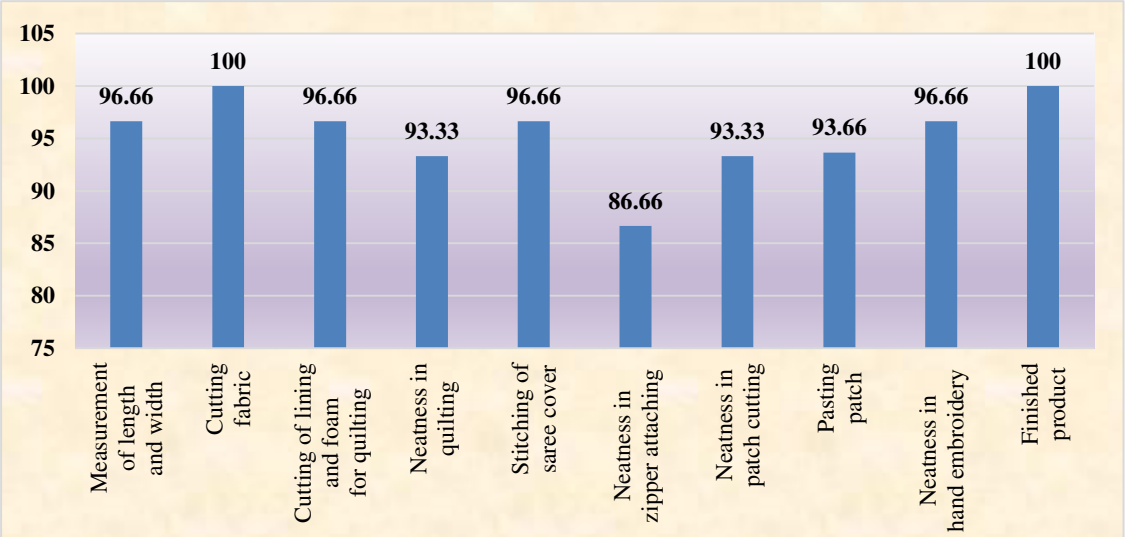


Figure 17: Percentage distribution of respondents by Skill in developing Saree Cover

Table 9 figure 17 shows that cent per cent respondent were able to do fabric cutting and finishing the product, nearly 96.66 per cent respondent were good in measurement of fabric, cutting of lining, stitching and neatness in hand embroidery. 93.33 per cent respondents were known to have knowledge about neatness in quilting, patch cutting and pasting patch. Only 86.66 per cent respondents were able to get neatness in zipper attaching.

Overall skill developed among rural women:

It was assessed by adding the scores of all the steps involved in making of five attractive utility items from used textile. The total steps were 40; the total score was calculated by multiplying the number of respondents multiply by 30 which was 1200and the respondents got total score 1144 with overall skill development of 95.33 per cent.

Table 10: skill developed overall among respondents

n = 30

S.NO.	Items	Total scores for each product	Scores obtained by all respondents	Per cent
1.	Shopping bag	210	200	95.23
2.	Sling bag	270	255	94.44
3.	Mobile cover	210	203	96.66
4.	Multi-purpose wall hanging	210	200	95.23
5.	Saree cover	300	286	95.33
	Total	**1200**	**1144**	**95.33**

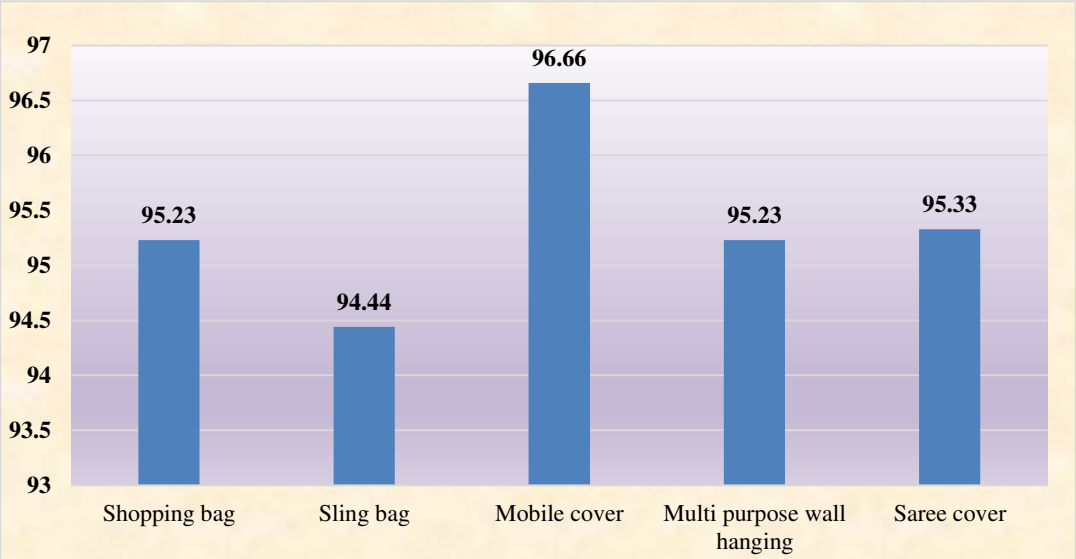


Figure 18: Percentage distribution of respondents by development of overall skill

Table 10 and figure 18 shows that as per impact of training and skill development, the women got 95.33 per cent marks in overall skill development of utility items through used textile and the respondents came under the category of excellent (above 75%). The respondents were very attentive and they were daily attend the training and learn new things.

Lodha (2013) concluded in a Entrepreneurship development through Niwar products among prisoners of Udaipur that the prisoners got 95.20 per cent marks in overall skill development of value added Niwar products.

SUMMARY

Skill development for rural women is a process whereby rural women are able to organize themselves to increase their self reliance, to assist their independent right make their own choices and to control resources which will assist in challenging and eliminating their own subordinate and it is widely recognized that women work and economic capabilities can facilitate them to achieve their own control over resource and grow self confidence and self esteem.

Fashion and clothing play many roles in our lives. For making textiles more interesting, they need to be well designed and if they are also safe for environment, they would have dual advantage. Refashioning clothes and accessories is a great way to renovate one's wardrobe without wasting money for buying new things at the retail store. Renovation and refashioning is done by changing the style of the used garments and making quilts, rags, rugs, and many other household articles.

Post-consumer textile waste: It is also called house hold waste and dirty waste. According to wang et. al., 2003, any worn out, damaged and out of fashion apparel and textile product which is discarded and no longer in use by the wearer are called post consumer textile wastes.

Objectives

- To develop utility items using used textile.
- To impart training on development of utility items through used textile.
- To assess the impact of rural training on women.

Methodology

The present study is exploratory which is based on Skill development among rural women on reuse of Textile. The study was conducted in Udaipur city and Savina Kheda village of Rajasthan. Structured interview schedule was used as tool to collect the desired information.

For the research purpose a sample size of 30 rural women were selected by random sampling method and 5 experts of Textile and Apparel Designing. A 15 days training was organized at Savina Kheda village. Researcher taught preparation of 5 utility products through used textile in the first 10 days of training program. A training

package (booklet) entitled “Development of Products by Utilization of used textile” was developed by researcher. Shopping bag, Sling bag, Mobile cover, Multi-purpose wall hanging and Saree cover were made by researcher (as shown in plate) and method was shown step by step with appropriate photograph. It was evaluated by a panel of experts from the field of Textiles and Apparel Designing. The developed booklet was judged as very good by panel of experts. Frequency and percentage was used to analysis the data. At the end of training programme, the researcher took their skill assessment test and women made five utility items. Each and every right step was given 1 mark and each and every wrong step was given 0 marks. After that researcher analyzed marks and categorized in 3 rank order i.e. excellent (above 75%), very good (60-75%) and fair (below 60%).

Development of tool

- Structured interview schedule
- Rating performa
- Skill assessment test

Data collection

- Selection and Survey of rural women
- Development of utility items
- Organization of training programme and assessment of skill development

Analysis of data

The data was analyzed through following methods.

- **Categorization:** When the data were collected they were categorized. This was done in order to make coding simpler.
- **Coding:** After categorization, coding was done as per the predetermined code characteristics for response through coding sheet.
- **Tabulation:** The coded data was decoded by transforming it from code sheet to comprehensive table.

- **Frequency and percentage**: Frequency and percentage were used to analyze background information and knowledge of respondents before training, after training.

- **Mean:** The mean for a data set, the mean is the sum of the observations divided by the number of observations. It identifies the central location of the data, sometimes referred to in English as the average. The mean was calculated using the following formula.

$$M = \Sigma (X) / (N)$$

Where **Σ** = Sum of X = Individual data point N = Sample size

- **Mean percent scores**: Scores obtained by the respondent in the knowledge test were converted in MPS to have uniformity in the scoring of different utility items.

$$\textbf{MPS} = \frac{\textbf{Sum of scores obtained}}{\textbf{Maximum score obtained}} X\ 100$$

Major findings of the study:

1. Background information:

Majority of the respondents (46.66%) were in the age range of 29-40 years, (73.33%) respondents were married, (73.34%) respondents were belonged to SC/ST/SS caste. Forty per cent respondents have their own business and rest of 60 per cent were in dairy, farming and job. 6.66 per cent respondents were post graduated.

2. Existing knowledge and practices of rural women in different components of utilization of used textile

Cent per cent respondents have knowledge about utilization of used textile, 93.34 per cent of respondents had knowledge about stitching.

3. Designing of intervention package

As per the objectives, an intervention package (booklet) entitled "Development of Products by Utilization of textile" was developed by the researcher.

4. Evaluation of intervention package by experts

90.40 per cent was obtain by photographs, 89.60 per cent was obtain by clearity, 88.80 per cent by subject matter, 86.40 per cent was obtain by booklet language and overall appearance, 84.80 per cent for visuality and 84 per cent for booklet effectiveness.

5. Implementation of training

A training was given to the rural women respondents at the place decided by the researcher "Savina Kheda" near Udaipur. A 15 days training programme was conducted in which the first 10 days were dedicated for training and the last 5 days for skill assessment.

6. Assessment of skill development among rural women

To assess the skill development among rural women, the researcher asked to women to make the utility items stepwise. For every right step researcher gave 1 mark and for every wrong step 0 mark. It was assessed by adding the scores of all the steps involved in making of five attractive utility items from used textile. The total steps were 40; the total score was calculated by multiplying the number of respondents by 30, which was 1200 and the respondents got a score of 1144 with overall percent of 95.33 per cent.

Conclusion

It can be concluded that the skill development for rural women is a process whereby rural women are able to organize themselves to increase their own self reliance**.** The developed intervention package was used for information of rural women through training for impact assessment in terms of gain in knowledge and skill development**.** Thus, it is concluded that developed utility items and intervention package were highly preferred in items of all parameters. with the help of training programme, many rural women was taught some new technique appliqué work, patch work, quilting and hand embroidery. The present study is an innovation in utility items through utilization of used textile which was found fruitful and it has encouraged rural women for self development.

RECOMMENDATION

1. A similar study can be conducted to develop other utility items using different techniques.
2. The rural women can be motivated to make efforts to develop some new home textile items, decorative & utility item from used textile.
3. Training should be organized in different rural sectors to promote utilization of used textile.
4. Follow up of the training should be done on regular intervals to improve their skills and solve their problems.
5. Training programme related to development of utility items through used textile can be organized for rural women to start a small scale enterprise.
6. In dept study to find out current problems and status of old fabric (used fabric) can be formulated.
7. Many other similar products can be developed using utilization of used textile like baby quilts, Chapati cover, bottle cover, rugs, purse can be developed using quilting technique.

LITERATURE CITED

Adams, E. 2015. New denim line is made of recycled H and M clothes. Retrieved from http://www.racked.com/2015/8/20/9182623/hm-recycled-denim. on June 27, 2018.

Agarwal, R. and Sharan, M. 2015. Municipal textile waste and its management. *Research Journal of Family Community and consumer sciences.* **3**:4-9.

Altum, S. 2012. Prediction of textile waste profile and recycling opportunities. *Fashion & Trends.* **20**:16-20.

Anonymous, 2011. Retrived from http://www.theguardian.com/sustainable - business/textile-recycling-challengs-industry. on july 22,2015.

Babel, S., Tiwari, M. and Swami, P. Innovative uses of goat hair fibers. *In Proceedings of National seminr on value added apparel and home textiles from natural fibers* held at Mumbai during March 2-3, 2012. P.7.

Babel, S. and Sharma, S. 2016. Impact of skill development training among rural women for entrepreneurship development. *International Journal of Home Science.***2**(3): 03-06.

Bairagi, N. 2014.Recycling of post-consumer apparel waste in India: channels for textile reuse. Retrieved from https://www.omicsonline.org/open-access/recycling-of-postconsumer-apparel-waste-in-india-channels-for-textile-reuse-2165-8064-1000331-98128. html on June 18, 2018.

Bala, S. 2012. Diversification of handmade carpets of Panipat. Ph.D. thesis submitted to Choudhary Charan Singh Haryana Agriculture University, Hisar, Haryna.

Bawa, M. 2006. Creation of handbags for youngsters. M.Sc. thesis, Punjab University, Chandigarh, India.

Bharti, J. 2011 Skill development among rural women for establishing micro enterprise through development of products using Chindi Durrie weaving technology. M.Sc. thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur Rajasthan.

Bhati, R. 2010. Development of bonded fabric using non-biodegrable waste for developing consumer products. M.SC. thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan.

Bhatia, D., Sharma, A. and Malhotra, U. 2014. Recycled Fibers : An overview. *International Journal of Fiber and Textile Research.***4:**77-82.

Brown, S. 2013. ReFashioned: Cutting-Edge Clothing from Upcycled Materials. Laurence King Publishing. London UK. P. 1.

Chutia, L. and Bhuyan A. 2014. Rural women weavers' of Assam: Artistic skills and entrepreneurial issues. *Asian Journal of Management.* **5**(3): 296-308.

Ekstrom, K. M. and Salomonson, N. 2014. Reuse and Recycling of Clothing and Textiles—A Network Approach. *Journal of Macromarketing*. **34** (3): 20-24.

Gambhir, V. 2011. Process for recycling cotton fabrics. Patent W02011077446Av. **17**:45-48.

Goudeau, C. 2012. An explored direction in solid waste reduction: household textile and textiles and clothing recycling. *Journal of Extension*. **50**:5-7.

Gupta, M. 2014. Potential use of shoddy yarn for development of textile products. M.Sc. thesis, Submitted to the Punjab Agricultural University, Ludhiana.

Gupta, M. and Gupta, D. 2016. Development of textile products from post consumer waste. *Textile Trends.* 59(14):32-35.

Gupta, V. and Khare, A. 2012.Value creation in post-consumer apparel waste. *Fashion Colloquia.***13:** 78-82.

Gupta, V. 2009. Recycling of textile waste in a small clusters and its contribution on the socio-economic upliftment of the community. *In Proceedings of Conferences by International Foundation of Fashion Technology Institutes on Fashion and Well-being* held at London during April, 2009. 425.

Hawley, J. M. 2008. Textile recycling as a system: A micro/macro analysis. *Journal of Family and Consumer Sciences.* 73: 35-40.

Hawley, J. M. 2008. Economic impact of textile recycling. Sustainable Fashion: Why now? Conversation exploring issue, practices and possibilities, New York: Fairchild books Inc.

Islam, M.D and Khan, A.D. 2013. Functional properties improvement and value addition to apparel by soil release finishes - A general overview. *Research Journal of Engineering Sciences.* **2:** 35-39.

Karware, A. 2017. Training module in textile craft for skill development. *International Journal of Home Science.* **3**(2):421-426.

Kaur, B. 2014. Development of eco-fashion accessories from leftover waste of zaribrocade fabrics. Retrived from. Krishikosh. Egranthac.In/bitstream/1/79602/1/ Baljit%20final% 20thesis%20cd.pdf. on June 30, 2018.

Kaur, G. and Kaur, D. 2015. Development of jewellery from solid waste. *Asian Journal of Home Science*. **10**:190-195.

Kaur, J. 2016. Designing of one piece dresses from used jeans. M.Sc. thesis, Submitted to the Punjab Agricultural University, Ludhiana.

Kaur, R. 2016. Development of an innovative ' cardweaving module' for creating stractured variations in textile products. M.SC. thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur Rajasthan.

Kim, K. S. and Kim, K. R. 2016. A case study comparing textile recycling systems of Korea and UK to promote sustainability. *Journal of Textile and Apparel, Technology and Management.* 10:1

Kumawat, M. 2010. A Study on'value addition of khadi Bed linen and assessment of its market potential'. M.SC. thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur Rajasthan.

Lodha, J. 2013. Entrepreneurship development through Niwar products among prisoners of Udaipur. M.SC. thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur Rajasthan.

Mathur, N. and Sohi, J. 2013. Recycling waste materials to construct handbags. *Textile Trends*. **55** (2):39-42.

Meadows, C.S and Goudeou, C. 2012. An unexplored direction in solid waste reduction : household textiles and clothing recycling. *Journal of Extension*.**50**:45-48.

Melania P. R., Hannia. Z. 2007. The growing strength of rural women micro entrepreneurs, Sustainable Reuse Development Directorate - IICA, melania.portilla@iica.int, hannia. zuniga@iica.int.

Nayak, L.K., Ammayappan, L. and Ray, D.P. 2012. Conversion of Jute Caddies (jute mill waste) into value added products. *Asian journal of Textiles*. **2**:1-5.

Newell, A. S. 2015.Textile waste resource recovery: A case study of New York state's textile recycling system. M.A. thesis submitted to Cornell University, New York.

Oakdene, H. 2009. Maximising Reuse and Recycling of UK Clothing and Textiles. Retrieved from www.nicefashion.org/files/Maximising the Reuse and Recycling of Cloths and Textiles. On 22 july, 2018.

Oke, O.K. 2010. Socioeconomic and Environmentl Sustinability Through Recycling of Chemical Wastes. *Research Journal of Applied Sciences*. **5**:13-19.

Rahman, F. H., Sethy, S. and Saikia, P. 2012. Women empowerment through the preparation of Jute diversified products and efficient marketing. *Indian Research Journal of Extension Education*. **12**:91-95.

Roy, A.N. and Basu, G. 2010. Development of newer products with spun wrapped jute yarns. *Indian journal of natural products and resources*. **1**:11-16.

Roy, S. Sarangi, A. and Choudhary, S. 2010. Communication sources and utilization pattern of rural farm youth in Karnal district of Haryana. *In: Proceedings of International Conference on communication For Development in the Information Age: Extending the Benefits of Technology for All.* Department of Extension Education, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi, (India). Cited From http://agropedialabs.iitk.ac.in/open access/sites/default/files/MDC%2013.pdf retrieved on August 14, 2107.

Sandin, G. and Peter, G. M. 2018. Environmental impact of textile reuse and recycling – A review. *Journal of Cleaner Production*. **184**: 353-365.

Sasha, 2009. Craft for contemporary living, Meet Sasha –New Internationalist – Australia – a fair Trade organization. htm. February 2009.

Saxena, N. 2012. Adaptation of cubism era designs for designing home furnishing items. *Journal Man Made Textile In India*. 7:241-43.

Sharma, E. and Prajapati, P. Value addition to kenaf natural fibre and its utilization in home textiles. In proceedings: National Seminar on Value Added Apparel and Home Textiles From Natural Fibres held at Mumbai during 2-3, 2012, p. 31.

Sharma, R. and Goel, A. 2017. Development of Nonwoven Fabric from Recycled Fibers. *Journal of Textile Science & Engineering*. **6** (289) :4-9.

Soni, J. and Soni, S. (2014) Eco-Friendly Utility Bags: desiging of eco-friendly bags using reveres applique. *Textile Trends*. **10**:51-53.

Sujata, 2009. Renaissance of quilt (kaudi) making and value addition. M.Sc. thesis submitted to Choudhary Charan Singh University of Agriculture Sciences, Dharwad.

Swami, C. 2014. Development of diversified products using chokla wool. M.SC. thesis submitted to Maharana Pratap University of Agriculture and Technology, Udaipur, Rajasthan.

Verma, B. 2015. Challenges Of Skill Development And Rural Women Entrepreneurship. *International Journal Of Multidisciplinary Research And Modern Education.* **1**(1):599-606.

Wang, G. and Namhun, L. 2012. The Methodology of Utilization of Waste and Recycled Materials in Construction. *In Proceedings of International Conference on Sustainable Design, Engineering, and Construction*. held at Department of Construction Management, East Carolina University, Greenville during November 2012 -13. P:7.

Yadav, M. 2013. Textile Printing. Text book of Textile Designing. M/s Royal Offset Printers, New dehli. P.p. 60-62.

Zamani, B. 2014. Towards Understanding Sustainable Textile Waste Management: Environmental impacts and social indicators. M.SC. thesis submitted to Chalmers University of Technology, Goteborg, Sweden.

MAHARANA PRATAP UNIVERSITY OF AGRICULTURE AND TECHNOLOGY
COLLEGE OF COMMUNITY AND APPLIED SCIENCES
DEPARTMENT OF TEXTILES AND APPAREL DESIGNING

M.Sc. Thesis, 2019

Subject: Skill Development among Rural Women for Utilization of Used Textile

Abstract

Skill and knowledge are the motivating factors of the economic growth and community development of any country. They have become even more important in this increasing pace of globalization. The poverty and unemployment problems will be solved through vocational skill training.

The present investigation was undertaken to study the utilization of used textiles. The study was conducted on rural women in the village of Savina Kheda, Udaipur district of Rajasthan. The objectives of the present investigation were to study the existing knowledge and identify the training needs of rural women in the area of the utilization of used textiles. An interview schedule was used for collecting data from thirty respondents regarding the preferences for the stitching of utility items to be prepared from used textiles. An intervention information package was developed for imparting training to rural women. Impact of training was assessed through developed products on information empowerment of rural women in terms of skill development.

The developed booklet was rated by a panel of five experts on a five point rating scale ranged from “Excellent” to “Poor”. Experts gave maximum score 90.40 per cent to photographs, 89.60 per cent gave booklet clearity, 88.80 per cent gave subject matter,86.40 per cent gave booklet language and overall appearance, 84.80 per cent for visuality and 84 per cent for booklet effectiveness.

The training programme was of 15 days. Researcher taught preparation of 5 utility items (Shopping bag, Sling bag, Mobile cover, Multi-purpose wall hanging and Saree cover) using used textile in the first 10 days of training programme. At the end of training programme, researcher took their skill assessment test and women made five utility items. Each and every right step was given 1 mark and each and every wrong step was given 0 marks.

The results of the investigation were interpreted using percentages and mean scores. It was assessed by adding the scores of all the steps involved in making of five attractive utility items from used textile. The total steps were 40; the total score was calculated by multiplaing the number of respondents multiply by 30 which was 1200and the respondents got total score 1144 with overall skill development of 95.33 per cent.

Major Advisor Research Scholar

egkjk.kk izrki d`f"k ,oa izkS|ksfxdh fo'ofo|ky; leqnk; ,oa O;ogkfjd foKku egkfo|ky;] mn;iqj jktLFkku oL= ,oa ifj/kku vfHkdYiuk foHkkx LukrdksŸkj mikf/k & 2019

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vuq{ksi.k

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60 izfr'kr us Li"Vrk] 88-80 izfr'kr us fo"k; oLrq] 86-40 izfr'kr us cqdysV dh Hkk"kk vkSj lexz :i fn;k] n`';rk ds fy, 84-80 izfr'kr vkSj cqdysV dh izHkko'khyrk ds fy, 84 izfr'kr dh ifj.kke fn;kA tkap dh O;k[;k izfr'kr vkSj ek/; vadksa ds mi;ksx ls dh xbZA mi;ksx fd, x, oL= ls ikap vkd"kZd mi;ksfxrk oLrqvksa dks cukus esa 'kkfey lHkh pj.kksa ds vadksa dks tksM+dj bldk ewY;kadu fd;k x;k FkkA dqy pj.k 40 Fks] dqy Ldksj dh x.kuk mŸkjnkrkvksa dh la[;k 30 ls xq.kk dh xbZ tks 1200 Fkh vkSj mŸkjnkrkvksa dh dqy Ldksj 1144 feyk ftlesa 95-33 izfr'kr dk lexz fLdy MoyiesaV FkkA

eq[; lykgdkj

'kks/kdrkZ

lk{kkRdkj izi=

Hkkx ¼1½ ¼Appendix - I½

¼v½ lkekU; tkudkjh

¼1½ O;fDrxr tkudkjh

1- izf'k{k.kkFkhZ dk uke

2- xkao dk uke

3- rglhy dk uke

¼2½ vk;q

18 ls 22 o"kZ	23 ls 28 o"kZ	29 ls 35 o"kZ

¼3½ oSokfgdLrj

vfookfgr	Fookfgr	fo/kok	ifjR;Drk

¼4½ cPpksa dh la[;k

1&2	2&4	4 lsvf/kd

¼5½ ifjokj

Ø-l-	fooj.k	
1-	lfjokj dk izdkj	1- la;qDr 2- ,dkdh

¼6½ ikfjokfjd vk;

Ø-l-	1000&10000	10000&20000	20000 ls vf/kd	vU;

¼7½ tkfr

fuEutkfr@ vuqlwfprtkfr@ tutkfr	vU; fiNM+koxZ	lkekU; oxZ

¼8½ ikfjokfjd O;olk;

[ksrh@Ms;jh	ukSdjh	Lo;a dk m|e

¼9½ ikfjokfjd f'k{kk

vf'kf{kr	ek/;fed	mPpek/;fed	Lukrd	mPpf'k{kk

¼10½ Hkwfe

ugha	4 ch?kkls de	5&9 ch?kk	9 ch?kk ls vf/kd

¼11½ ?kj

dPpk	fefJr	iDdk

¼12½ lwpuk dk Lrks=

Ø-l-	fooj.k	
1-	Vsfyfotu	
2-	jsfM;ks	
3-	fQYe	
4-	v[kckj	
5-	izn'kZuh	

Hkkx ¼2½

1- D;k vki iqjkus oL=ksa dk mi;ksx djuk tkurs gS\

¼v½ gk¡ ¼c½ ugha

2- D;k vki dksbZ O;olk; djrh gS\

¼v½ gk¡ ¼c½ ugha

3- D;k vki vkenuh dk ,d vkSj L=ksr pkgrh gS\

¼v½ gk¡ ¼c½ ugha

4- D;k vki Lo;a dk dksbZ NksVk O;olk; 'kq: djuk pkgsxh

¼v½ gk¡ ¼c½ ugha

5- D;k bl fo"k; esa iwoZ esa dksbZ Vªsfuax yh gS\

¼v½ gk¡ ¼c½ ugha

6- ;fn ugha rks vki D;k Vªsfuax ysuk pkgsxh\

¼v½ gk¡ ¼c½ ugha

7- D;k vkidks flykbZ vkrh gS\

¼v½ gk¡ ¼c½ ugha

8- D;k vki izf'k{k.k gsrq fu;fer le; ns ik;saxs\

¼v½ gk¡ ¼c½ ugha

9- D;k vkidks iqjkus oL=ksa ls dqN cukuk vkrk gS\

¼v½ gk¡ ¼c½ ugha

10- ;fn vkrk gS rks D;k\ ,oa dgk¡ ls lh[kk\

Categories	Products in Booklet					
	shopping bag	Sling bag	Mobile cover	Multipurpose Wall hanging	Saree cover	overall
Language						
Visualise						
Photograph						
Subject matter						
Effectiveness						
Clarity						

Rating performa 1

For evaluation of Booklet

5 point continuum Rating scale

5. Excellent 4. Very good 3. Good 2. Moderate 1. Poor

Skill Assessment Performa

S. No.	Steps involves in shopping bag	Marks
1.	Measurement of bag length and width	
2.	Cutting fabric	
3.	Stitching of shopping bag	
4.	Neatness in patch cutting	
5.	Pasting patch	
6.	Neatness in hand embroidery	
7.	Finished product	

S. No.	Steps involves in sling bag	Marks
1.	Measurement of bag length and width	
2.	Cutting fabric	
3.	Cutting of lining and foam for quilting	
4.	Neatness in quilting	
5.	Stitching of sling bag	
6.	Neatness in zipper attaching	
7.	Neatness in appliqué work	
8.	Neatness in hand embroidery	
9.	Finished product	

S. No.	Steps involves in mobile cover	Marks

1.	Measurement of length and width	
2.	Cutting fabric	
3.	Stitching of mobile cover	
4.	Finishing by piping	
5.	Attaching of Velcro and lace	
6.	Neatness in hand embroidery	
7.	Finished product	

S. No.	Steps involves in multipurpose wall hanging	Marks
1.	Measurement of length and width	
2.	Cutting lining fabric and main fabric	
3.	Stitching ofmultipurpose wall hanging	
4.	Finishing by piping	
s5.	Making fabric flower	
6.	Neatness in attaching fabric flower	
7.	Finished product	

S. No.	Steps involves in saree cover	Marks
1.	Measurement of length and width	
2.	Cutting fabric	
3.	Cutting of lining and foam for quilting	
4.	Neatness in quilting	
5.	Stitching of saree cover	
6.	Neatness in zipper attaching	
7.	Neatness in patch cutting	
8.	Pasting patch	
9.	Neatness in hand embroidery	
10.	Finished product	

Each and every right step will be given 1 mark.

Each and every wrong step will be given 0 mark.

lk{kkRdkj izi=

Hkkx ¼1½ ¼Appendix - I½

¼v½ lkekU; tkudkjh

¼1½ O;fDrxr tkudkjh

1- izf'k{k.kkFkhZ dk uke

2- xkao dk uke

3- rglhy dk uke

¼2½ vk;q

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1&2	2&4	4 lsvf/kd

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Ø-l-	fooj.k	
1-	lfjokj dk izdkj	1- la;qDr 2- ,dkdh

¼6½ ikfjokfjd vk;

Ø-l-	1000&10000	10000&20000	20000 ls vf/kd	vU;

¼7½ tkfr

fuEutkfr@ vuqlwfprtkfr@ tutkfr	vU; fiNM+koxZ	lkekU; oxZ

¼8½ ikfjokfjd O;olk;

[ksrh@Ms;jh	ukSdjh	Lo;a dk m|e

¼9½ ikfjokfjd f'k{kk

vf'kf{kr	ek/;fed	mPpek/;fed	Lukrd	mPpf'k{kk

¼10½ Hkwfe

ugha	4 ch?kkls de	5&9 ch?kk	9 ch?kk ls vf/kd

¼11½ ?kj

dPpk	fefJr	iDdk

¼12½ lwpuk dk Lrks=

Ø-l-	fooj.k	
1-	Vsfyfotu	
2-	jsfM;ks	
3-	fQYe	
4-	v[kckj	
5-	izn'kZuh	

Hkkx ¼2½

1- D;k vki iqjkus oL=ksa dk mi;ksx djuk tkurs gS\

¼v½ gk¡ ¼c½ ugha

2- D;k vki dksbZ O;olk; djrh gS\

¼v½ gk¡ ¼c½ ugha

3- D;k vki vkenuh dk ,d vkSj L=ksr pkgrh gS\

¼v½ gk¡ ¼c½ ugha

4- D;k vki Lo;a dk dksbZ NksVk O;olk; 'kq: djuk pkgsxh

¼v½ gk¡ ¼c½ ugha

5- D;k bl fo"k; esa iwoZ esa dksbZ Vªsfuax yh gS\

¼v½ gk¡ ¼c½ ugha

6- ;fn ugha rks vki D;k Vªsfuax ysuk pkgsxh\

¼v½ gk¡ ¼c½ ugha

7- D;k vkidks flykbZ vkrh gS\

¼v½ gk¡ ¼c½ ugha

8- D;k vki izf'k{k.k gsrq fu;fer le; ns ik;saxs\

¼v½ gk¡ ¼c½ ugha

9- D;k vkidks iqjkus oL=ksa ls dqN cukuk vkrk gS\

¼v½ gk¡ ¼c½ ugha

10- ;fn vkrk gS rks D;k\ ,oa dgk¡ ls lh[kk\

Categories	Products in Booklet					
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Language						
Visualise						
Photograph						
Subject matter						
Effectiveness						
Clarity						

Rating performa 1

For evaluation of Booklet

5 point continuum Rating scale

5. Excellent 4. Very good 3. Good 2. Moderate 1. Poor

Skill Assessment Performa

S. No.	Steps involves in shopping bag	Marks
1.	Measurement of bag length and width	
2.	Cutting fabric	
3.	Stitching of shopping bag	
4.	Neatness in patch cutting	
5.	Pasting patch	
6.	Neatness in hand embroidery	
7.	Finished product	

S. No.	Steps involves in sling bag	Marks
1.	Measurement of bag length and width	
2.	Cutting fabric	
3.	Cutting of lining and foam for quilting	
4.	Neatness in quilting	
5.	Stitching of sling bag	
6.	Neatness in zipper attaching	
7.	Neatness in appliqué work	
8.	Neatness in hand embroidery	
9.	Finished product	

S. No.	Steps involves in mobile cover	Marks

1.	Measurement of length and width	
2.	Cutting fabric	
3.	Stitching of mobile cover	
4.	Finishing by piping	
5.	Attaching of Velcro and lace	
6.	Neatness in hand embroidery	
7.	Finished product	

S. No.	Steps involves in multipurpose wall hanging	Marks
1.	Measurement of length and width	
2.	Cutting lining fabric and main fabric	
3.	Stitching ofmultipurpose wall hanging	
4.	Finishing by piping	
s5.	Making fabric flower	
6.	Neatness in attaching fabric flower	
7.	Finished product	

S. No.	Steps involves in saree cover	Marks
1.	Measurement of length and width	
2.	Cutting fabric	
3.	Cutting of lining and foam for quilting	
4.	Neatness in quilting	
5.	Stitching of saree cover	
6.	Neatness in zipper attaching	
7.	Neatness in patch cutting	
8.	Pasting patch	
9.	Neatness in hand embroidery	
10.	Finished product	

Each and every right step will be given 1 mark.

Each and every wrong step will be given 0 mark.

oL=ks ds iqu% iz;ksx ls mRiknksa dk fodkl

eq[; lykgdkj
'kks/kdrkZ

MkW- :iy ckcsy
T;ksfrdk pkS/kjh

leqnk; ,oa O;ogkfjd foKku egkfo|ky;]

egkjk.kk izrki d`f"k ,oa izkS|ksfxdh

fo'ofo|ky;

mn;iqj ¼jkt-½

oL=ks ds iqu% iz;ksx ls mRiknksa dk fodkl

MkW- :iy ckcsy

izksQslj

T;ksfrdk pkS/kjh

'kks/kNk=k

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leqnk; ,oa O;ogkfjd foKku egkfo|ky;]

egkjk.kk izrki d`f"k ,oa izkS|ksfxdh fo'ofo|ky;

mn;iqj

Hkwfedk

oL= euq"; dh ewyHkwr vko';drkvksa esa ls ,d gSA vkfndky ls euq"; oL= dk mi;ksx djrk vk jgk gSA ekuo lH;rk ds fodkl ds lkFk&lkFk gh oL= fuekZ.k dyk esa Hkh fodkl gqvkA vr% euq"; dks mfpr <ax ls oL=ksa dk mi;ksx djuk vkuk pkfg,A miHkksxdrkZ dks bl ckr dh tkudkjh Hkh gksuh pkfg, fd miHkksx i'pkr~ Hkh oL=ksa dk iqufuZek.k fd;k tkrk gSA dbZ ckj ,d gh oL= igu&igu dj cksfj;r lh gksrh gS] dHkh&dHkkj oL= NksVs iM+ tkrs gS] dbZ ckj oL= dgh ls dVQV tkrs gS rFkk ftUl ds diM+s rks dkQh

yEcs le; rd dke esa fy, tkrs gS vkSj mUgsa dqN ugha gksrk ,slh fLFkfr esa oL=ksa dks ;k rks fdlh dks nku esa ns fn;k tkrk gS ;k fQj mudk iqufuekZ.k fd;k tkrk gSA oL=ksa dk iqufuZek.k djds eksckby doj] lkM+h doj] ik;nku] csx] ilZ] twrs] ,lsljht] 'kkWfix csx] yksdj ilZ] osftVscy csx vkfn cuk, tk ldrs gSA

MkW- :iy ckcsy

T;ksfrdk pkS/kjh

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lkexzh % iqjkuh ftUl] dSaph] d'khns okyk /kkxk] fizUVsM doj] bapVsi] lqbZ&/kkxk] pkWd

fof/k %

1- loZizFke ftUl dks dkVdj 14x14** ds nks pkSdksj VqdM+s dkVssaxsA

2- rRi'pkr~ cph gqbZ ftUl ds diM+s ls 26x 6-5** dh nks ifÍ;k¡ dkVsaxs rFkk vkil esa tksM+ nsaxsA

3- vc 14x14** ds nksuksa VqdM+ksa dks lkFk esa j[kdj uhps ls FkksM+h xksykbZ ns nsaxsA

4- rS;kj iÍh dks VqdM+s ds Åijh fljs ls tksM+uk 'kq: djsaxs rFkk tgka geus xksykbZ nh Fkh tgk¡ 4&5 pqUuVs Mkyrs gq, iwjh fly nsaxsA

5- rRi'pkr~ bl rS;kj Hkkx dks csx ds nwljs Hkkx ls tksM+ nsaxsA

6- vko';drkuqlkj ftUl ds diM+s dk csYV rS;kj djds mls csx ls tksM+ nsaxsA

7- vUr esa ltkoV ds fy, isp odZ] d'khnkdkjh dj ldrs gSA

8- bl izdkj lqUnj lk 'kkWfiax csx rS;kj gks tk,xkA

fl vax csx

lkexzh % iqjkus diM+s] Qkse] psu] dSaph] juj] bapVsi] lqbZ&/kkxk] pkWdA

fof/k %

1- loZizFke iqjkus diM+ksa dh flykbZ [kksydj] izsl djds dafVax gsrq rS;kj djsaxsA

2- csx cukus ds fy, diM+s ij 16x11** dk fu'kku yxkdj bl uki ds nks VqdM+s dkV yssaxsA

3- vkSj blh uki ds vLrj o Qkse Hkh dkV ysaxs rFkk rhuksa dk vkil esa j[kdj D;wfYVax dj nsaxsA

4- bl rjg csx ds nks Hkkx rS;kj gks tk,xs rFkk vc ,d Hkkx dks ysdj ml ij 4x4** dk fu'kku yxk dj pkj Hkkxksa esa dkV ysaxs vkSj psu yxk nsaxsA

5- vc tsc cukus ds fy, diM+k dkVsaxs rFkk psu yxs gq, VqdM+ksa ij vUnj dh vksj j[kdj lhy nsaxsA

6- vko';drkuqlkj diM+s dk csYV dkVdj] D;wYV djds csYV rS;kj djsaxs vkSj csx ds nksuksa Hkkx ds chp esa j[kdj csx lhy nsaxsA

7- vUr esaa psu dks [kksydj csx dks lh/kk dj nsaxsA bl rjg fLyax csx rS;kj gks tk,xkA

8- ltkoV ds fy, ,lyhd odZ] d'khnkdkjh] isp odZ fd;k tk ldrk gSA

eksckbv

lkexzh % iqjkuh ftUl] fizUVsM diM+k] d'khns dk /kkxk] Mksjh] dSaph] lqbZ /kkxk] osYØksA

fof/k %

1- eksckby doj cukus ds fy, 6x3** ds ftUl ds nks VqdM+s dkVsaxs vkSj nks NksVs frjNs VqdM+s dkVsaxsA

2- nksuksa frjNs VqdM+ksa dks eksckby doj ds VqdM+s ij vkeus&lkeus j[k dj fly ysaxsA

3- vc eksckby doj ds nks VqdM+s 6x3** dks vkil esa fly ysaxs rFkk fizUVsM diM+s dh pkjksa vksj ikbfiax yxk ysaxsA

4- fizUVsM diM+s dh 2** dh ,d iV~Vh dkVsaxs vkSj ml ij osYØks Vsi yxk,saxs rFkk eksckby doj ds ihNs dh vksj j[kdj fly ysaxsA

5- vko';drkuqlkj ,d Mksjh ysdj eksckby doj ls fly ysaxsA

6- vkd"kZd fn[kkus ds fy, bl ij d'khnk ds uewus cuk ldrs gSA bl izdkj lqUnj lk eksckby doj rS;kj gks tk,xkA

eYVh iiit okWv

lkexzh % iqjkus diM+s] cqdje] bapVsi] lqbZ] /kkxk] pkWd] dSaph

fof/k %

1- loZizFke ftUl ysdj 24x12** dk fu'kku yxk dj dkV nsaxsA bl uki dk cqdje o vLrj dk diM+k dkVsaxsA bu rhuksa dks feykdj Åij ls frdksuk dkV nsaxsA

2- vc 7x12** ds rhu VqdM+s dkVsaxs rFkk blh uki dk cqdje o vLrj dk diM+k dkV dj vkil esa tksM+ nsaxsA /;ku jgs cqdje diM+s o vLrj ds chp jgsA

3- 7x12** ds lHkh VqdM+ksa ij ikbfiax yxk nsaxs rFkk rhuksa VqdM+ksa dks 24x12** ij j[k dj fly nsaxs rFkk ikbfiax yxk nsaxsA

4- vUr esa 6** dh yEch iÍh dkVdj] eksM+dj fly nsaxs vkSj Åij dh rjQ tgk¡ frdksuk dkVk Fkk ogk¡ ij ihNs dh vksj tksM+ nsaxsA ftlls fd ge bls dgh yVdk ldsA

5- ltkoV ds fy, fHkUu&fHkUu jaxksa ds diM+ksa ls Qwy cukdj fly nsaxsA bl rjg lqUnj lk okWy gSafaxx rS;kj gks tk,xkA

lkM+h doi

lkexzh % iqjkus diM+s] Qkse] psu] juj] bapVsi] dSaph] lqbZ /kkxk] d'khns ds /kkxsA

fof/k

1- loZizFke gekjs ikl tks Hkh iqjkus diM+s gS tSls 'kVZ] dqrkZ] nqiVVk budh flykbZ [kksy dj] izsl djds dfVax gsrq rS;kj djsaxsA

2- diM+s ij 16x20** fu'kku yxkdj nks VqdM+s dkVssaxsA

3- blh uki ds nks VqdM+s vLrj rFkk Qkse ds Hkh dkVsaxsA

4- D;wfYVax dh fof/k }kjk lkMh doj ds nksuksa VqdM+ksa dks rS;kj dj ysaxsA

5- vc 64** dh yEch rFkk 2** pkSM+h iV~Vh dkVsaxs rFkk bls Hkh D;wfYVax }kjk rS;kj dj nsaxsA

6- 64x2** dh iV~Vh ls 16** dk VqdM+k dkV dj fudky nsaxs rFkk cph gqbZ iV~Vh dks chp ls dkVdj psu tksM+ nsaxs rFkk juj Mky nsaxsA

mlds ckn fQj ls 16** ds VqdM+s dks fQj ls 64** ds lkFk tksM+ dj fly nsaxsA


7- rRi'pkr~ 16x20** dk ,d D;wYVsM diM+k ysdj mlds ,d fljs ls 64 bap dh psu yxh iV~Vh dk flyuk 'kq: djsaxsA pkjksa vksj fly ds tksM+ nsaxs fQj nwljk D;wYVsM diM+s dks blds Åij j[k dj iV~Vh ls tksM+rs gq, fly nsaxsA

8- psu [kksy dj lh/kk dj nsaxs rFkk ,Iihd odZ ;k isp odZ }kjk bls lqlfTtr dj nsaxsA

9- bl rjg lqUnj lk lkM+h doj rS;kj gks tk,xkA


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गृह विज्ञान महाविद्यालय, उदयपुर