

**Designing and Developing of Indo Western Formals for Women using
Sungudi and Khadi Fabric**

By

AAYISHA SAMEERA. M

(20PTF001)

A Thesis Submitted to the
**Avinashilingam Institute for Home Science and Higher
Education for Women
Coimbatore-641043**

**In partial fulfilment of the requirement for the degree of
MASTER OF SCIENCE IN TEXTILES AND FASHION APPAREL**

May, 2022

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Certified as Bonafied Research work


Signature of the Head of the Department


Signature of the Supervisor 30.05.22

DECLARATION

I declare that the dissertation entitled "**Designing and Developing of Indo Western Formals for Women using Sungudi and Khadi Fabric**" submitted by me for the degree of Master of science (M.Sc.,) is the record of work carried out by me during the period from 2021 to 2022 under the guidance of **Dr.G. Bagyalakshmi**, M.Sc., M.Phil., Ph.D. (Avinashilingam), Assistant Professor (SG), Department of Textiles and Clothing, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore-642 043 and has not formed the basis for the award of any Degree, Diploma, Associate ship, Fellowship, Titles in this University or any other similar institution of higher learning.



Signature of the Candidate

CERTIFICATE FROM THE SUPERVISOR

I certify that dissertation entitled "**Designing and Developing of Indo Western Formals for Women using Sungudi and Khadi Fabric**" submitted for the degree of Master of science (M.Sc.,) Textiles and Fashion Apparel by **Aayisha Sameera M** is the record of project work carried out by her during the academic year 2021 to 2022 under my guidance and supervision and this work has not formed the basis for the award of any Degree, Diploma, Associate ship, Fellowship, Titles in this University or any other similar institution of higher learning.


Signature of the HOD


Signature of the Supervisor with Designation 30.05.22

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Acknowledgement

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INTRODUCTION

More than ever, the fashion industry is focused on a modern human being and its clothing needs which evolved in to the need to send message of personality via clothing and dressing style. Dressing up has become part of the modern human being's intimacy, thus the task of fashion clothing manufacturers is very complex – it requires creativity, knowledge, time, monitoring, analysis, proactivity, passion, dedication and number of other elements that must be meant to the right extent in order to satisfy the wishes and needs of consumers. The process of designing fashion products involves two key processes – one is product adaptation and the other one is creation, and the most common one is the combination of these two. The process of developing a new clothing requires tremendous effort of all actors in the process – starting from designers, manufacturers, retailers, to marketing managers – in order for the right model to reach its end-user at the right time and in the right place. The fashion market is especially flexible and fluctuating. As an extremely dynamic area, with the domain of creativity, fashion is globally specified by constant and exciting changes. However, creativity in the domain of fashion industry is not sufficient by itself, to gain consumer audience, to survive and to ensure their planned survival in the market, a lot of other skills are required in order to support these new ideas and creations. The fashion marketing enables clear distinction between a model which ends up in a warehouse and a model which is recommendable, which consumers are looking for, which is purchased and worn. Still, for a fashion product to be created and to survive on the market, it requires market research, tailoring of a system of products and services offered, set up contacts and communication with consumers on a long-term basis and a range of other activities which contribute to gain and maintain a stable market position, (Slijepcevic and Percic, 2019).

In a career of a fashion designer, their future lies to a great extent of the individual's meaning and idea, it does not depend only on forms and materials. **“Fashion Conceptualists”** are those who work by ideal innovation and experimentation. Conceptual fashion design is also defined as fashion which helps in ‘finding yourself’, by expressing the authentic nature of your internal and external self (Sau and Hau, 2018). Increasing curiosity has been given to the revolutionary conceptual design in fashion industry. In reaction to the need for constant renewal, a number of leading designers had stepped out of the commercial side of fashion. Those designers are characterized as fashion conceptualists. These fashion conceptualists approach to fashion with

their innovative personal philosophies and approaches. Designers such as Zandra Rhodes and Hussein Chayalan are featured by this fashion dualism. A systemic view of creativity in fashion and textiles is conducted in 4 major dimensions namely, “the domain”, “the product”, “the person”, and “the process”. It is very important to clearly understand the design process, and the emergence and development of conceptual fashion design in order to provide well developed studies in order to aid the fashion industry, (Joe Au, 2018).

Fashion's great innovations often upspring from inspired designers developing unique concepts and ideas, (Dieffenbacher, 2020). Creativity is a very emotive issue in fashion and fashion designers themselves cannot agree what it is or indeed if there can be too much of it as a recent article voicing the opinion of two well-known designers demonstrated Wood, (2002). Creativity has been regarded as a type of problem solving (Matlin,2002). Matlin, 2002 states that all of the various approaches to the study of creativity, two have been particularly significant; Divergent thinking: it is still considered to be the important aspect of creativity. Emphasizes the importance of divergent thinking style and measures creativity in terms of the number of variety of responses made to a given problem or test (Guilford, 1967, Finke, 1992, Mayer 1999).

Investment theory of creativity: it sees creativity as a complex combination of attributes and maintains that five attributes are important: intelligence, knowledge, motivation, encouraging environment, appropriate thinking styles and appropriate personality. This approach is attractive to researchers interested in the social element, such as business, design, engineering etc. as there is a strong emphasis on factors within and outside of the person, such as motivation, the working environment (Sternberg and Lubart, 1995, Amabile, 1996).

The Sungudi craft has got an interesting journey from central and western India to the city of Madurai. In sungudi craft as each knot is untied, it reveals a classic elegance of the dotted designs and restrained beauty of surface ornamentation. It combines contemporary designs and styles with the ancient technique. Now-a-days to make sungudi sarees attractive to young women and to banish the notion that the traditional saree is featured only with dots, innovative Sungudi designs and products are being introduced during the ‘sungudi day’. In recent years, in view of tough competition from other textile fabrics, in order to meet the market demand, this fabric “Sungudi” as it is commonly known, is made with modern designs and techniques of block printing, wax printing and screen printing.

Khadi fabric is very native to India. It was in 1990's designers that for the first time started adopting khadi and since then today khadi is revamped and used and promoted by many designers. Khadi is a hand-woven natural fiber cloth originating from eastern regions of the Indian subcontinent, and mainly from Eastern India, North-eastern India and Bangladesh, but now is broadly used throughout India and Pakistan. Khadi fabric is a cloth made from hand spun and hand-woven yarn from cotton, silk and wool fiber or from a mixture of any two or all of them. Khadi is known for its rugged texture, comfortable feel and it has got ability to keep people cool in summer while keeping them warm during winters. It has a handcrafted self-textured making each khadi cloth unique. The evolution of khadi over the period of time is high. So many leading designers have taken the choice on the fashion challenge to refigure the humble fabric in to a high-fashion wear. The low carbon footprint level of khadi makes it as one of the most sustainable fashion product and so now becoming a priority for consumers, (Tripathi and Atre, 2020).

Women's formal clothing, which was primarily confined to monochromatic colours, sober solids and stripes, has undergone a sea of change today, transforming in to a youthful, classy and chic choice of clothes for contemporary women. The segment has broadened its area to include dresses, formal tops and gowns besides the always running skirts, shirts, trousers and blazers. It has also taken under its wing, segments like semi-formal, business casual, smart casual all of which are marginally different from the main segment (Ngaihte, 2019). On considering the uniqueness of sungudi and khadi, the investigator has taken up a study on blending traditional Madurai sungudi fabric with khadi fabric to bring out a Indo Western formal wear for women at ages of 20-25 years.

The objectives of present research are;

- To select sungudi and khadi material for women's formal wear
- To create suitable outfit for women
- To select garment in different variations
- To sew garments and matching accessories
- To evaluate and estimate the cost.

2. REVIEW OF LITERATURE

The goal of a fashion designer is to create aesthetically pleasing garments by manipulating design elements conditionally based on design principles, (Davis, 1996). However, a design concept is the representation of a designer's abstract ideas of final entities or garments. The 'Inspiration' plays the important role of establishing the vision of a final product, (Aspelund, 2010). As a key inspiration of this research work, blending sungudi with kadhi fabric, designed and developed in to an Indo Western formal wear for women; the review is carried out under the following headings:

2.1 Clothing for Women

2.1.1 Casual Wear

2.1.2 Party Wear

2.1.3 Formal Wear

2.1.4 Street Wear

2.1.5 Business Casual

2.1.6 Ethnic Wear

2.1.7 Haute Couture

2.2 Design Process and Presentation

2.2.1 Drawing

2.2.2 Collaging

2.2.3 Juxtaposition

2.2.4 Deconstruction

2.2.5 Key Focus

2.3 Standard Measurement and Pattern Making Process

2.3.1 Standard Measurement

2.3.2 Pattern Making Process

2.4 Fabric Studies

2.4.1 khadi

2.4.2 History of Khadi

2.4.3 Sungudi

2.4.4 History of Sungudi

2.5 Studies Related to Formal Wear for Women and Interpretation

2.1 Clothing for Women

Women's clothing are articles of clothing designed for and worn by women. Typical women's clothes include skirts, dresses, shirts, sweaters, trousers, coats, chemises and jeans. Some articles of clothing are geared specifically towards women, but most of the items are the same as items of men's clothing. The difference is that the clothes are designed to fit women and sold in a separate range from the men's clothes.

2.1.1 Casual Wear

Casual clothes make the women very comfortable to meet the demands of their hectic life schedule apart from making them feel and look good. A casual wear collection of clothes is made up of leather or denim jackets, fashionable sweaters, skirts made out of chiffon, silk, velveteen, cargo, cropped or utility pants, capris and shirts made out of denim, silk and chambray, different washes of denim etc. such casual wear can be made to look more chic if scarves, hats, mittens, handcrafted belts etc are added to them as accessories. Smart casuals are those which comprise of casual shirts, cotton or silk blouses and long sleeve tees. These smart casual offer natural relaxation and a feeling of laid on the back comfort to the wearer. The materials can be anything from cotton, silk, flannel etc. Casual summer clothes are meant to be easy to wear and clean. Shorts, easy shirts, skirts and cool pants are part of the summer wardrobe which are made from nylon, cotton, linen, silk and blends. Summer casual wear calls for trendy and lively pieces with large patterns and bright colored clothing, <https://www.fibre2fashion.com/industry-article/2789/women-s-casual-clothing-make-a-fashion-statement>.

2.1.2 Party Wear

Unless it's a themed party, one can wear anything from a maxi to distressed jeans, a shirt dress to leather pants. There are variety of party carried out across the globe like; 90's themed party, Christmas party, house party, masquerade party, birthday party, cocktail party, pool party, college party, bachelorette party, dinner party, beach party, boat party etc., (Pratima Ati, 2022). The party wear encompasses a fabulous collection of elegant evening dresses, nightgowns, sleep shirts and formal wear in many styles and colours. Sometimes the best party dress is a sharp-as-hell suit – or, even better pajamas.

2.1.3 Formal Wear

Formal wear is a casual term that describes a specific type of clothing. In England it is referred as formal dress. Formal wear is clothing that is worn to formal events such as weddings,

debutant balls, cotillions and higher government functions such as state dinners. The formal wear for women includes ball gowns, evening gown, cocktail dress etc. Indian younger women, today, seamlessly switch from ethnic to western wear and there has been an increase in preferences for Indo western formals among younger professionals. However, women's formal clothing which was primarily seen with monotonous monochromatic colours, sober solids and stripes, which now has undergone a sea of change, transformed in to a youthful, chic and classy choice of clothes for contemporary women. This segment has got a wide spectrum to include dresses, gowns and formal tops besides the always present shirts, skirts, trousers and blazers. With the upcoming trends, this segment has widened like smart casual, semi-formal, business casual, all of which are marginally different from the main segment, (Sharma, 2019).

2.1.4 Street Wear

Streetwear is a casual fashion style that first became popular in the 1990's. It incorporates comfortable yet trendy clothing such as logo T-shirts and crop tops, hoodies, baggy pants, and expensive sneakers. Streetwear takes inspiration from both hip-hop and skater style, with the added element of intentional product scarcity. Followers of the latest trends in streetwear are known as Hypebeasts, and many go to great lengths to procure limited-edition designer baseball caps, hoodies, sneakers, and more, (France, 2020).

2.1.5 Business casual

Business casual attire is broadly defined as a code of dress that blends traditional business wear with a more relaxed style that's still professional and appropriate for an office environment. There is a wide range of business casual dress options for women from dark jeans and slacks to blouses and sweaters, knee length or maxi dresses, jackets or blazers, polo shirts, simple professional accessories such as scarves, belts or jewelry and can add closed-toed shoes like loafers, oxfords, pumps, flats or boots, (Headen, 2022).

2.1.6 Ethnic Wear

Eicher and Sumberg (1995) define ethnic dress as an "ensemble and modifications of the body that capture the past of the members of group, the items of tradition that are worn and displayed to signify cultural heritage". The researchers (Forney and Rabolt, 1985 – 1986) defined ethnic dress as traditional dress symbolizing the ethnicity of the individual, (Chattaraman and Lennon, 2008). Every Indian regions ethnic wear like Sari or the Salwar-kameez comes in vibrant colours, pattern

and designs. Ethnic wear occupies major part in wardrobe for Indians festive spirits and our tradition is never out of fashion.

2.1.7 Haute Couture

Haute couture referred to as exclusive custom-fitted, one-of-a-kind high fashion clothing. These high fashion garments are often seen on the red carpets being worn by celebrities. The concept of “Haute Couture” was originated in France in the 19th century. It refers to the production or processing of clothes beyond the general standard according to customers’ needs (Chen, S. and Long, Q., 2019). It is focused on making outfits from high-quality, expensive, often unusual fabric and sewn with extreme attention to detail and finished by the most experienced and capable of sewers. It is often time consuming and uses hand-executed techniques.

2.2 Design Process and Presentation

Research is integral part of any design process that begins to investigate all the elements explored during design process from conceptualization to the product development. Design process includes initial hunt for ideas, market and client study, fabric and resources, production and execution, finding out vendors prior to design till the stage it gets final feedback from the experts and the users, (Soni and Ghosh, 2018). The design process in fashion includes all facets of the process undertaken in advance of perceiving, constructing and marketing fashion. A variety of factors have been found to influence designers during the creative process, and these must be understood in advance of proposing a model of design process in fashion. “The creative process is the term used to describe the conceptual steps involved in the development of innovative solutions to problems” (Fiore and Kimle, 1997). It was a sequence of purposeful, conscious and logical options to create visually the meaning that the creator wants to express, (Winner, 1982). The process was not linear, rather there were specific cognitive activities that the designer drew upon and returned to at various points in the design process, (Au, S., Taylor, G. and Newton, W., 2004). The formulation of idea and design concept is a significant step for a product design. Creativity and design activities always involve identifying and resolution problems. According to Bruce and Cooper (2000), at least 80% of the costs are determined at the front end of the process. Hence, a designer must consider the following fundamental values and functions of a product during the conceptual stage,

- Solve current problems
- Prevent potential problems

- Resolve product-related conflicts
- Maintain and improve the quality of the product
- Provide innovative and aesthetic values to the consumer
- Incorporate sensory values in the product
- Offer a relevant and resonant product

Design activities and creativity always involves identifying problem and problem solving. Based on my research, the design and product development process are carried out in the following sequential units, which is similar as Kotler and Rath's (1984) new product development process.

Pre-development stage

- Market research and analysis

Design development stage

- Idea formation, design concept (like style, theme, materials etc), colour palette.
- Development of ideation sketches, trimmings and fabrics.
- Selection of style and fabric

Product development stage

- Development of technical sketches
- Prototype development/production
- Selection of prototype samples

The output of research is huge and it is very important to compile research in a proper format so that it can be used progressively during the project. A visual diary has a personal touch, that is used to take continuous feedback and constant discussions with the mentors involved. The mediums used could be Xeroxes, prints, scrap sheets, write-ups, doodles etc. This research can be compiled using following methods (Seivewright & Sorger, 2017);

2.2.1 Drawing

Drawing is an elementary tool which is used by designers at almost all stages. It is the most ideal way to record any information. Any medium of colours or pencils can be used. Partial or complete drawing of the elements which are sourced will help in ideating and provide design directions.

2.2.2 Collaging

This is another important approach to collate the information that has been gathered. Two pictures either similar or contrasting based on designers thought process could provide 3rd direction to the project. While one works with images, should not be scared of distributing the visual balance of the composition. It has to be aesthetically pleasant to eyes.

2.2.3 Juxtaposition

If collage is all about sticking and cutting pictures together, then juxtaposition is when designer start to place relevant material together at one place. E.g., a choice is made about particular silhouette; a sketch is placed along with the probable fabric, surface choice, technique and detailing. To some extent even the trims and design details can be put together.

2.2.4 Deconstruction

Disassemble or to deconstruct is used to have a different outlook to view things. The existing clothes can be ripped apart to see how they are traditionally made and assemble the same components in a different manner than the original. It may provide insights to come up with new silhouette or form direction.

2.2.5 key Focus

At this stage it allows you to work on series of pages which helps you to identify the elements which you wish to work on for your project (Soni and Hiren, 2018)

2.3 Standard Measurement and Pattern Making Process

Dressing is one of the fundamental needs of the human being, serving various and diverse purpose. Proper measurements are necessary for making good drafting and accurate patterns. Many wants clothing that fits them well. Fit in women's wear is a complex issue with many facts. Ideal body shapes have always been used by the apparel industry from which technicians take dimensions for pattern making and fitting and designers create their new ideas.

Developing garment patterns accurately is also important. A number of measurement charts are available for making paper patterns. It is necessary to associate garment patterns with body shapes in order to provide fit and satisfaction. They are all based on the anthropometric surveys (body measurement surveys). Many different pattern making systems are used in the apparel industry, developed according to the nation's anatomy and changes in the pattern preparation steps with respect to different systems. At present NIFT has undertaken the project to standardize body measurement across India.

2.3.1 Standard Measurement

A good garment designing is based upon the perfect body measurements. Garment fitting is directly associated with body measurements. A unit of measurement is a definite magnitude of a quantity, defined and adopted by convention or by law, that is used as a standard for measurement of the same kind of quantity. Body shape is the major factor that has an influence on fit and satisfaction with clothing (Lee J. Y., et. al, 2007). The definition, agreement and practical use of units of measurement have played a crucial role in human endeavor from early ages up to the present. A multitude of systems of units used to be very common. Now there is a global standard, the International System of Units (SI), the modern form of the metric system.

Female body builds and sizes vary by nationality, age and body type. The most commonly used female anthropometric factors are bust girth, waist girth and hip girth. Well, throughout India most brands have six sizes – XS, S, M, L, XL and free size (XXL), the two extremes – XS and XXL sell the least. The purpose of an apparel sizing system is to divide a varied population in to homogenous subgroups. Members of a subgroup are similar to each other in body size and shape so that a single garment can adequately fit each of them. Members of different subgroups are dissimilar and would therefore require different garments (Ashdown & Delong, 1995). Customized standard size charts are thus required for each location to maximize the fit of garments for the intended clients and minimize inventories. Optimum number of body sizes collected randomly will reflect the true body measurements and proportions existing in the target population. The sizes obtained can be expected to provide the best possible fit for garments, (Gupta et.al, 2006)

As stated by Zarapkar (2005), the measurements are taken comfortably without pulling the tape too tightly or too loosely but keeping it firmly by placing two fingers in between the tape of the body. The designer must try to know the customer's requirements regarding the fit, style, shape, pockets, collar, seams, buttons before-hand of taking the measurements. The figure should be carefully observed and record it in the order book. The measurement should be taken in a proper order and with a certain sequence. Each and every girth measurement should be taken tightly, as ease for movements is included in the draft. The measurement should be checked twice.

2.3.2 Pattern Making Process

James (2002), defines a pattern as a form, template or model which can be used to make or to generate things. According to Mullick (2002), pattern refers to a final piece of paper ready to place the fabric. The first step in producing a garment is the creation of design and the construction of

pattern for the components in design. Subramaniam (1987) describes paper pattern as drawn for three or four sizes on a single paper with different lines. An accurate body measurement for drafting is the key to good pattern. Traditionally clothing was made with marking measurements on fabric by tailor's chalk for each customer. This is also known as tailoring method in pattern cutting and home sewing.

The first consideration is to decide which measurements are required. From the data collected the development of size charts for pattern grading and garment production begins. The size chart formulation begins with the division of average body measurements artificially in to categories to form a range of sizes. These average body measurements are obtained from survey of body measurements. There are 5 stages in developing size charts for garments, as described below;

- Obtaining body measurement
- Statistically analyzing measurements
- Adding ease allowances
- Formulating the size charts
- Fitting trials to test size charts

The '**first pattern**' is the first set of a pattern that has been obtained from pattern drafting as per continent's size chart. Wherein tracing of the main line or necessary lines are done from drafting pattern excluding any seam allowances. Seam allowances are given in production pattern. It is usually prepared to check the pattern shape concerning the steps of cutting, copying, folding, modifying and experimenting to get the first pattern developed for each design from the basic block. After testing or checking shapes from the first pattern, seam allowance, trimming allowance, buttonhole, button attaching, dart, pleat, notch, ease etc are included in the copied pattern known as a working pattern. This pattern is used as a manipulation to generate design patterns. The pattern pieces are stitched to get a sample garment (a prototype of the design sketch) and checked for the fit as per the particular body measurement.

2.4 Fabric Studies

Clothing history made from a very wide variety of materials. Materials have ranged from woven materials, knitted to leather, furs and exotic natural and synthetic fabrics, (Bruce.et.al, 1989). The words fabric and cloth are used in textile assembly traders as synonyms for textiles. Clothing protect against many things that might injure the uncovered human body, clothes protect people from the elements, including rain, snow, wind and other weather, as well as from the sun,

however, clothing that is too sheer, thin, small, tight, offers less protection. Clothes also reduce risk during activities such as insects, noxious chemicals, weather, weapon, and contact with abrasive substance (Gilligan, 2010). Clothing is an integral part of human life and has number of functions, protection, adornment and status, (Kittler.et.al, 2003). Clothes can insulate against cold or hot conditions. Further they can provide a hygienic barrier, keeping infections and toxic materials away from the body. Clothing also provides protection from harmful UV radiation. Traditionally, textiles are used for various applications covering apparel suiting, shirting, dress material, scarf, home furnishing, technical and functions, industrial, automobile, medical, agriculture, and protective textiles such as for defense clothing and all security clothing.

2.4.1 Khadi

Khadi also known as Khaddar is one of the most important segments of textile sector in India. Before India got its independence from Britishers Ghandiji through Swadeshi movement revived khadi as a tool to attain freedom by boycotting foreign made goods and promoting the ideology of being-self reliant and self-sustainable India. After independence the popularity of khadi declined though even after governments initiatives to promote this sector. It was in 1990's that for the first time designers started adopting khadi and since then today khadi is revamped and used, which was promoted by many designers. Khadi is a hand-woven natural fiber cloth originating from eastern regions of the Indian subcontinent, mainly Eastern India, Northeastern India and Bangladesh, but today it is broadly used throughout India and Pakistan. Khadi fabric is a cloth made up of hand spun and hand-woven yarn from cotton, silk and wool fiber or from a mixture of any two or all of them. Khadi in India is being promoted by the Khadi and Village Industries Commission (KVIC) and the Ministry of Micro, Small and Medium Enterprises (MMSME) (Tripathi and Atre, 2020).

2.4.2 History of Khadi

The origin of khadi fabric can be dated back to ancient civilization of Mohenjo-Daro by historians where they mention about presence of hand-woven cloths that are so similar to the texture of khadi. Khadi had a special recognition and popularity in the Mauryan Era. It is also mentioned in Chanakya's "Arthashastra" where at that time many expert artisans were producing cotton cloth material that played pivotal role in that era's economy. The imagery of khadi can also be traced in Ajanta caves. Other than this there are many mentions of khadi and similar kind of

fabric at many places in ancient history and it is a symbol of Indian rich textile heritage which has evolved over the decades.

In 1918, Mahatma Gandhi started the khadi movement as a relief program, for the poor masses living in Indian village. The khadi movement aimed at boycotting foreign goods and promoting Indian goods. Hand spinning and handloom weaving were elevated to an ideology for self-reliance and self-government. Gandhiji saw it as the end of dependency on foreign machine made materials and thus giving a first lesson of real independence. Khadi became a tool for betterment of people of India especially in rural areas. Khadi is very closely associated with India's freedom movement and it's a matter of pride for every Indian. Khadi then was a very minimal fabric in plain white and coarse in texture.

Now, designers are coming up with clothes that are made from khadi and are recognized by celebrities, artists, and politicians too. In recent time the government is also actively boosting khadi sector to make khadi an 'Indian brand' and promoting it globally and thereby giving rise to economy of our country. Blending of khadi with trendy designs in a sustainable way is what today's consumer are looking for. With time, a retiring fabric, which was once known as poor man's cloth is now becoming popular among the elite and rich class. (Tripathi and Atre, 2020).

2.4.3 Sungudi

For ardent lovers of sari, the famous sungudi cotton is a geographical indicator of Madurai in the world of Indian textiles. The cloth is soft; the dyes are bright and the dots distinct, thus enticing several takers. The traditional dots are largely preferred, through it costs time, effort and money. The hand-painted wax-resistance designs and motifs are more in demand. The price of handwoven six yard saris range from 800-1,500 (Indian rupees) as a pure cotton combed yarn is used. Power-loom made saris are sold for cheaper rates. These saris usually range from 300-500(Indian rupees). The units also make eight, nine and a half and 10.5 yard saris. In order to appeal younger buyers there are salwar materials, stoles and dupattas are available in recent days. Each dot of Madurai Sungudi sari is hours of labour for those who weave and others who dye the cloth. The process takes two days and the weavers are more than 70 years old.

The Silk-thread-men incorporated the tie and dye craft in creating Madurai's signature textile, the Sungudi saris. Even today it washed and bleached white fabrics fluttering on the banks of River Vaigai can be witnessed. There is a saying that the women of Madurai were the inspiration of Sungudi saris. Elated by how women in Madurai tied their hair in to a bun, the weavers created

round patterns on the fabric which resembled a bun. They took tiny pinches of the cloth and tied it with threads. Then the fabric is immersed in containers of natural dyes. When the fabric gets opened out, the tied up areas kept their base colors, while the rest of the fabric took in the dye. The dotted pattern that resulted looked like stars scattered across the night sky. Hence, it was said that sungudi designs were inspired by celestial constellations that led to the creation of those circular motifs, <https://www.sundarisilks.com/blogs/article/the-magnificence-of-madurai-sungudi>.

The Silk-thread-men named this master piece of a weave as sungudi, derived from the Sanskrit word Sunnam meaning “round”. The classic elegance of the dotted designs and restrained beauty of surface ornamentation created by the sungudi craft is revealed as each knot is untied. It combines an ancient technique with contemporary designs and styles. The sungudi saree has got a perfect essence of grace, beauty, and ease which merges the art of elegance in itself. They usually come in array of vibrant and subtle colours like crimson, olive, yellow and blue.

2.4.4 History of sungudi

The ringing of temple bells, the scent of jasmine, jigarthanda and the magnificent sungudi Sari is what makes Tamil Nadu’s thoonganagaram Madurai a beautiful city. Every weave has a tale to tell, making each sari a masterpiece that brings the wearer sheer pleasure. The sungudi craft has an interesting journey from central and western India to the city of Madurai.

Around 500 years ago, Sourashtrian weavers migrated from Gujarat and settled in Madurai when the Nayak dynasty was ruling. These weavers were highly skilled artisans. Their women specialized in tying, while the men expertised on dyeing. Once they settled in Madurai, they decided to bring their rich tie-die heritage a new meaning by adding a local touch to their craft. These saris were worn by queens in the pre-colonial period and were honoured in the kingdoms of Tamil Nadu. Every year, 8th February is celebrated as sungudi day to honour their unique heritage and magnificent work of craftsmanship. “These sarees are perfect for our tropical weather as they are cotton. They absorb sweat and dry out easily. Moreover, they are not too expensive and easy to maintain”. The art has been passed down over the generations. Madurai is not only known for sungudi, but also for weaving, and thus meets a large demand for sungudi sarees even today. As a result, sungudi craft is a legacy of ancient handcrafting skills, a cultural signifier and a symbol of regional identity.

2.5 Studies related to formal wear for women and interpretation

A Research done by Raymond AU, Osmud Rahman, Yo Yu Han AU (2009), An exploratory study of business attire: Formal or Casual. The main objective of this study was to understand white-collar employee perceptions and attitudes toward a “business casual” dress code, to identify, develop and design a set of guidelines and recommendations of a “cool Biz”-like code for the Hong Kong government as well as for other private business enterprises. They have taken survey with questionnaires, and did an Analysis and Empirical findings. According to these findings, it is evident that most of the respondents were concerned about the functional values of comfort and quality rather than the aesthetic values of style and colour in regards to business attire. And also, most of the Hong Kong white-collar workers prefer conventional business attire rather than the latest styles and colors. The author mentions that, due to the hot and humid summer weather in Hong Kong, the factor of comfort plays an important role on clothing evaluation and purchasing decisions. In this study the female respondents preferred light weight fabrics for skirts and blouses. According to those results the researcher conclude that the majority of business workers would choose wearing casual attire over formal attire. But, despite the preference for casual attire, maintaining a professional business standard was a high priority and excluded the wearing of T-shirt and shorts.

A research done by Sook Eun, Jae-Ok Park points out that “A Study on Clothing Images in Women's Formal and Casual Brands” (2008). The purpose of this study was to investigate and make comparison of clothing images presented in women's formal and casual brands. The results were as follows:

- Formal brands focused on thirties and forties in age ranges and better and prestige in price zones, while casual brands centered on twenties in age range and better and volume in price zones.
- Luxury, modern and feminine were more frequent words than others both in formal and casual brands, but elegant was found most frequently in formal brands, while comfortable, chic and simple were found frequently in casual brands.
- Clothing images were classified into four types and appeared in elegance, modernity, individuality, and activeness order in formal brands, while clothing images in casual brands were classified into five types including youthfulness and appeared in elegance, activeness, modernity, individuality, and youthfulness order.

- Elegance was a highly presented as clothing image in all the age ranges except thirties of formal brands but modernity and activeness with elegance were presented in price zones of casual brands. This study found that there were differences in clothing images in women's formal and casual brands.
- An article written by Rosy Ngaihte Sharma (2019) states that “the changing definition of women’s formal wear in India”. There is a bright future ahead for the women’s formal wear category in India.

There are innumerable opportunities in terms of innovation and incorporating state-of-art developments in fabric and design to make premium formal wear at affordable prices. There is never a lack of need for good quality products that are comfortable, durable and aesthetic”. “Formal wear for women in India is only set to grow. Women are looking for stylish, practical and well fit garments for their formal wear”.

3. METHODOLOGY

This study on aims to use the traditional Madurai sungudi art and the elegance of our Indian traditional fabric Khadi, by matching both the fabrics and developing an Indo Western formal outfit for Indian women (20-25 years).

3.1 Survey

3.1.1 Selection of Sample

3.1.2 Selection of Method

3.1.3 Preparation of Questionnaire

3.1.4 Conducting the Survey

3.1.5 Analysis of Data

3.2 Standardization of Body Measurements

3.2.1 Selection of Age Group

3.2.2 Taking Body Measurements

3.2.3 Standardizing Body Measurements

3.3 Selection of Theme and Design

3.3.1 Inspiration

3.3.2 Mood Board

3.4 Garment Designing

3.4.1 Selection of Garment

3.4.2 Fashion Flats

3.4.3 Design Development

3.4.4 Finalized Designs

3.5 Pattern Drafting

3.5.1. Drafting Procedure

3.5.2 Sample Preparation using Muslin

3.5.2.1 Selection of Material

3.5.2.2 Laying, Marking and Cutting

3.5.2.3 Construction

3.5.2.4 Evaluation and Fitting

3.6 Final Garment Making

3.6.1 Selection of Fabric for Sewing

3.6.2 Preparation of Fabric for Cutting

3.6.3 Cutting

3.6.4 Sewing

3.6.4.1 Sewing Procedure for A-Line Dress

3.6.4.2 Sewing Procedure for Kurthi and Straight Pants

3.6.4.3 Sewing Procedure for Kaftan Top and Palazzo Pant

3.6.4.4 Sewing Procedure for Bodycon Dress

3.6.4.5 Sewing Procedure for Top and Skirt

3.7 Fit Analysis and Subjective Evaluation

3.7.1 Fit Analysis

3.7.2 Subjective Evaluation

3.1 SURVEY

3.1.1 Selection of Sample

Sample is defined as a part of the population which one selects for a purpose of investigation, (Dutt, 1998). A sample may achieve much response rate and higher cooperation in general while every element in a population has got equal chances to be selected. It is called as Random sampling. On considering these facts that the interview is conducted among 105 members consisting of students age between 20 and 25 from all over Tamilnadu. They were selected at random as sample to collect information about their preferences and knowledge on their preferences for Indo western formal outfit, Madurai Sungudi art, their ideas about formal attires and developing Indo Western formals using Sungudi and khadi fabric, and their preferences about wearing Indo Western Formal made out of Sungudi and khadi fabric.

3.1.2 Selection of Method

In this research survey is taken with questionnaires which typically include a series of items reflecting the research aims. Questionnaires include demographic questions with addition to valid and reliable research instruments. The questionnaire is prepared and delivered in an electronic format through email or an internet based program, (Ponto et al., 2010). This self-administered mailed, group or internet based questionnaires are relatively low cost and practical for large sample (Check & Schutt, 2012). Therefore, it is opted to collect the data through online survey questionnaire method.

3.1.3 Preparation of Questionnaire

After a careful review, the researcher prepared questionnaire to collect information about their knowledge on Sungudi and Khadi fabric, selection of silhouette for Indo Western Formal outfit, selection of colour, and to know whether they prefer wearing indo western formals using Sungudi and Khadi fabrics and trimmings. The questionnaire thus framed is presented in Appendix – A.

3.1.4 Conducting the Survey

The framed questionnaire was shared to the selected students through mail and mobile applications. The data was submitted and recorded in the google form, and the researcher will be easily able to collect the recorded information from the google forms.

3.1.5 Analysis of Data

Data analysis is an important step in a research, which makes studying data in a lot simpler and more accurate way. The analysis of data helps to gain in-depth understanding of individual viewpoint, (Flick, 2014). The data thus collected was analysed, consolidated, tabulated and presented in the chapter: Results and Discussion.

3.2 Standardization of Body Measurements

The average measurement of a large population of a particular group is called as standardized measurements. These measurement refers to an average figure. Critical to the development of an apparel pattern is the way in which the human body is measured and how those measurements are interpreted. Apparel sizing is not an exact science, (Tait, 1998).

Measuring the human body is the precursor to develop garments to fit the body. A goal of 20th century mass production and mass distribution system was to provide apparel for “Every-Body” (Kidwell & Christman, 1974). Huxley (1996) reveals that the part of the fashion industry that creates ready-to-wear clothing bases, fit of its garment on standard pieces called slopers that match the measurement of its target customers.

3.2.1 Selection of Age Group

On considering the above facts, the investigator selected 105 College girls (20 to 25 years) at random in and around Coimbatore colleges for the study.

3.2.2 Taking body measurements

Correct measurements are required for good fitting of garments. It is very much important to take correct body measurements as the structure of the body varies from person to person.

Correct measurements are only possible if one has knowledge about standard measurement and individual variation, (Gupta et al, 2005).

The body measurements of 105 college going girls were taken for the conduct of the study. The various body measurement was taken by the investigator and were recorded carefully in a sequential order which are given below;

TABLE I
VARIOUS BODY MEASUREMENTS

Chest	Around body, above bust and underarm
Bust	Around fullest part of bust
Hip	Around fullest part of hip, generally over the bottom, approximately 20cm below waistline
High hip	around hip bones, approximately 10 cm below waistline (Shoben and Ward, 1999)
Waist	around natural waistline
Back length	measure from the most prominent bone at base of neck to the natural waistline
Front length	from base of throat to natural waistline
Back width	from armhole to armhole, about half-way down
High chest	from armhole to armhole on the front, approximately 10cm below base of throat.
Shoulder	from neck joint to point at which arm joins.
Neck	measures around the base of the neck or the same line on the dress stand (Zarapkar, 2004)
Scye depth	front nape, down central back to lowest level of arm hole, (Cooklin, 1999)
Scye circumference	around armhole, whilst arm is in normal position
Neck to wrist length	From side of neck, along shoulder, down arm to wrist, allow tape measures

Under arm length	from under arm to wrist (Cooklin, 2005)
Bicep	around widest part of upper arm, high under the armpit
Wrist	around widest part of wrist
Hand width	around the widest part of hand (Bray, 2004)
Elbow width	around elbow with arm bent
Waist to knee length	from waist line, down center front to knee length
Waist to ankle length	measures from waistline, down center front to ankle length
Body rise	measures from waist line down to seal of chair cover counter of hips
Inside by length	measures down from crotch to level of outside ankle bone (Jindal, 1998)
Outside leg length	measures down from the waist, over hips and ankle bone
Upper arm circumference	taken around the fullest part of the arm muscle
Lower arm circumference	taken around the bottom of the sleeve (Verma and Dev, 2006)

An illustration (Fig.1) depicting the method of taking various body measurements by the investigator is presented in Appendix – B.

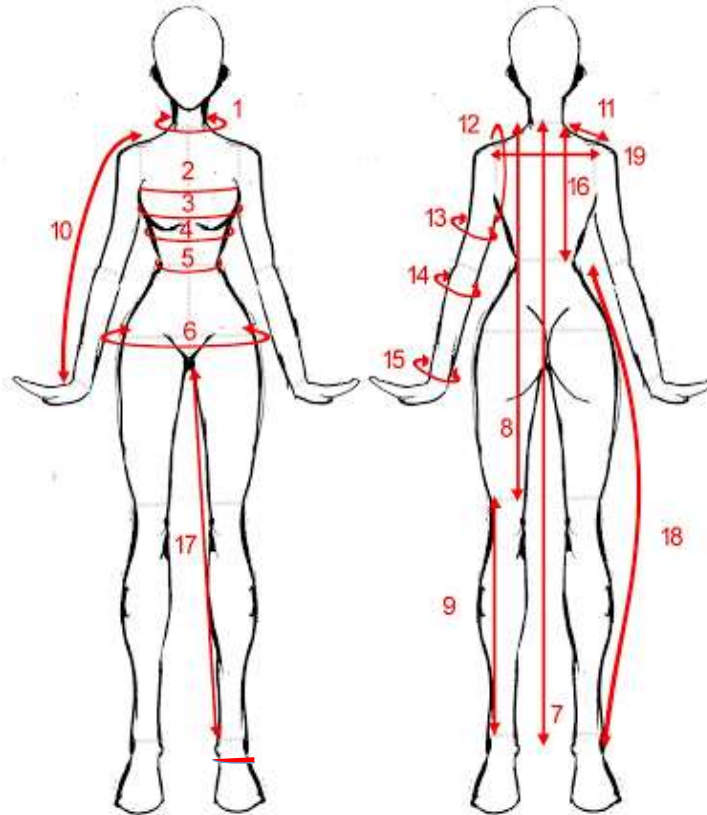


FIGURE 1
METHOD OF TAKING BODY MEASUREMENTS

Key:

- | | |
|----------------------------|------------------------------|
| 1. Neck | 11. Shoulder seam to neck |
| 2. Over bust | 12. Arm hole |
| 3. Bust | 13. Bicep |
| 4. Under bust | 14. Forearm |
| 5. Waist | 15. Wrist around |
| 6. Hips | 16. Top of shoulder to waist |
| 7. Neck to top of heel | 17. Inseam |
| 8. Neck to top of knee | 18. Out seam |
| 9. Top of knee to ankle | 19. Shoulder to shoulder |
| 10. Shoulder seam to wrist | 20. Bottom round |

3.2.3 Standardizing Body Measurements

Standardization of a body measurement method is a critical step for a mass customization in the apparel industry and is essential for apparel manufacturers in order to produce customized

garments. Standardization of body measurements is to get a specific set of body measurements which is said to be representation of the whole sample. Mullick (2002) says, taking measurements can be tedious but it is best to have a single session at which to record all the body measurements. To standardize the body measurements, each body measurement is divided in to specific class intervals. The body measurements of the selected college going girls of 20 to 25 years were grouped based on the specific class interval.

The mode is the value about which the items are most closely concentrated (Gupta, 2006). The body measurements are standardized by finding the modal value using the formula.

$$Mo = L + \frac{\Delta 1}{\Delta 1 + \Delta 2} \times i$$

where ‘L’ is the lower limit of the modal class,

‘ $\Delta 1$ ’ is the difference between the frequency of the modal class and pre-modal class,

‘ $\Delta 2$ ’ is the difference between the frequency of the modal class and the post-modal class,

‘i’ is the class interval of the modal class.

The mean value of 50 body measurements is taken into consideration to calculate the standardized body measurements. A sample calculation of the modal value is given in Appendix - C and the standardized body measurement of the adult girls (20 – 25 years) is given in Table – II

TABLE – II
STANDARDISED BODY MEASUREMENTS OF THE ADULT GIRLS

S.No	Details of Body Measurements	Standardized body Measurements (cm)
1	Chest	85.83
2	Waist	72.69
3	Hip	92.69
4	Shoulder width	34.85
5	Front waist length	33.02
6	Back waist length	35.11
7	Neck circumference	34.86
8	Shoulder to bust	22.01
9	Armscye	33.81
10	Upper arm circumference	32.6

11	Elbow circumference	31.03
12	Wrist circumference	17.02
13	Full sleeve length	58
14	Shoulder to hip	49.75
15	Shoulder to ankle	143.33
16	Shoulder to knee	91.03
17	Waist to hip	22
18	Waist to ankle	94.6
19	Ankle circumference	24.9
20	Crotch length	22.03

3.3 Selection of Theme and Design

3.3.1 Inspiration

Fashion inspiration is the outcome of creative research, which in turn is an essential part of the design process. It is the sourcing of and collection of ideas prior to design. Once subject is defined for the research one can carry out experimental and investigative research. It is an essential tool in the creative process and also provides information, inspiration and creative direction as well as a narrative to design collection, (Omotoso, 2018). The inspiration for this research was “Art of Madurai Sungudi”. The researcher got inspired by the Madurai sungudi art and developed Indowestern formal collections, by matching sungudi with our Indian traditional fabric Khadi.

3.3.2 Mood Board

Mood board is also called as inspiration board. Mood board is practically a collage of images, fabrics or materials used as a reference and graphical support of the previous profile concept made. Mood boards are designs and marketing tools used by designers to bring together apparently incongruent visual data to promote inspirations to develop suitable end-products. Mood board provides a “space” to arrange the collected visuals in a meaningful manner to the designer which enables the flow of thoughts, inspiration and creativity for design outcomes – products, (Diane, 2011). The researcher developed a simplistic mood board, which is further developed with an expansion of the creation/development stage from the collected information.

MOOD BOARD



FIGURE 2 – MOOD BOARD

3.4 Garment Designing

Garment designing, by definition, is the harmonious blend of various design elements to create a visually and esthetically pleasing end product. The design elements include colour, texture, balance, proportions, silhouette, focal point, shape and finally, the harmony of all the elements incorporated into the design. Each of these contributes towards the visual perception and psychological comfort of the garment, (Hunter and Fan, 2015). The designer defines during the drawing process of the garments, the garment's silhouette and its proportions, the clothing variants, the material and the accessories, (Purgaj, 2016).

3.4.1 Selection of Garment

For the study, the investigator chose to design five different garments which are;

- A-Line dress
- Kurthi and Straight Pant
- Kaftan Top and Palazzo
- Bodycon Dress
- Top and Skirt

As these garments are considered to be best suitable for indo western formal outfit. The investigator has designed 25 garments under each category emphasising different style elements using manual method of sketching. Each selected design was further manipulated by changing only their color combinations with selected fabric swatches. All together the investigator designed 50 designs incorporating various colours and prints. All the final 5 garment silhouette and color were selected based on the opinion and interest of the adult girls through online survey. The final manual designs were evaluated and selected by 50 textile experts. As a colour is consumed the investigator choose beige, white (khadi), yellow, pink, purple and forest green colour. For the all 5 garments a matching accessory was developed with the same fabric used in the garments. The garment designs are presented in Plate 1.

3.4.2 Fashion Flats

Drawing is an elementary tool which is used by designers at almost all stages. It is the most ideal way to record any information. Any medium of colours or pencils can be used: Partial or complete drawing of the elements that sourced will help the designers in ideating and provide design directions. Though it is informal but the best way to collate the research is in the form of scrap book or visual diary. All visual and textual research can be compiled in such a meticulous manner that it can be used appropriately. Scrap book or visual diary has personal touch and it is a handy source which can be used to explain the journey of a designer to any one with the support of visual analysis, (Seivewright & Sorger (2017)). The tools used for fashion sketching by the researcher were,

- A4 Sketchbook
- Drawing Pencils
- Pencil, Sharpeners and Erasers
- Fine Black Pens
- Watercolor Sets
- Markers
- Colour Pencils

3.4.3 Design Development

The development and formulation of design requires rigorous involvement and in most of the cases follows some or other process. The process involved should be a course of action that would make reaching the goal very much easier and simpler. Overall it is a very challenging job to create a design that is aesthetic, creative and innovative at the same time. Concept is the most important part of the design process. It is the point where the ideas are going to start and the basic shape of the design would be conceptualized. This stage requires the designer to come up with theme board, mood board, color palette, trends and the entire outline of the collection (Sarkar, 2011)

With the help of sketching tools, the selected five garments were designed one after the other. The design development starts with a rough flat sketches as described below;

- First the researcher made 25 rough flat sketches for the five garment styles.

- Then from that 25 designs, 5 final garment styles were selected based on subjective evaluation and trend.
- Five different Sungudi sarees were selected for the five different garment styles.
- Pure Plain khadi fabric was purchased to match with sungudi fabric for designing the garments in a unique way.
- The selected rough flat sketches were developed by mismatching the selected sungudi sari design with khadi fabric repeatedly.
- From the developed sketches, the final garment with a perfect combination of sungudi and khadi fabric design was selected by the 50 textile experts.
- Further, the final illustration was carried out with matching accessories and detailing in the garment.
- Based on these procedures, designs were developed for A-Line dress, Kurthi and Straight Pant, kaftan top and Palazzo, Bodycon dress and Top and Skirt.

DEVELOPED FLAT SKETCHES



Style 1

Style 2

Style 3

Style 4

A-Line Dress Manipulation (1 to 4) Styles

PLATE I



Style 1

Style 2

Style 3

Style 4

Kurthi and Straight Pants Manipulation (1 to 4) Styles

PLATE II



Style 1

Style 2

Style 3

Style 4

Kaftan Top and Palazzo Pants Manipulation (1 to 4) Styles

PLATE III



Style 1

Style 2

Style 3

Style 4

Bodycon Dress Manipulation (1 to 4) Styles

PLATE IV



Style 1

Style 2

Style 3

Style 4

Top and Skirt Manipulation (1 to 4) Styles


PLATE V

3.4.4 Finalized Garment Designs

In order to evaluate the final garment designs, 50 textile experts from Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore were chosen randomly for the study. The developed garment designs were attached on google form and the experts evaluated. The data thus collected were carefully consolidated, analysed systematically and presented in the chapter: Result and Discussion. The garment designs selected are given in the Table - III.

TABLE - III

NOMENCLATURE OF THE GARMENTS SELECTED FOR CONSTRUCTION

S.NO	Nomenclature Of The Garments Selected For Construction	Design Code	Pattern Code
1	 A-Line Dress	Style 4	CALP4

<p>2</p>	 <p>Kurthi and Straight Pant</p>	<p>Style 1</p>	<p>CKPP1</p>
<p>3</p>	 <p>Kaftan Top and Palazzo</p>	<p>Style 3</p>	<p>CKPP3</p>
<p>4</p>	 <p>Bodycon Dress</p>	<p>Style 2</p>	<p>CBCP2</p>

5	 <p data-bbox="329 720 524 751">Top and Skirt</p>	Style 3	CTSP3
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3.5 Pattern Drafting

Pattern is the wrapping of the body in fabric in different interesting and innovative designs. It is the blue print or map of the garment. Pattern drafting is a system of pattern cutting that uses a combination of ease allowance and body measurement of the customer to create patterns for the chosen design. Pattern making is a subject that opens several doors for creating infinite number styles by designers. A pattern maker interprets the designers sketch by drafting it through pattern pieces.

3.5.1 Drafting procedure

1. A-line dress

Square lines from 0 on a four-layer fold with folds at 0-2 and 0-5

Front

0-1 = $\frac{1}{4}$ chest + $\frac{1}{2}$ "

0-2 = full length + $\frac{1}{2}$ " – frill width

0-3 = $\frac{1}{12}$ of chest + $\frac{1}{4}$ "

0-4 = 2". Shape neck 3-4

0-5 = $\frac{1}{4}$ chest – $\frac{1}{4}$ " or shoulder + $\frac{1}{4}$ "

Square down from 5-6

5-7 = $\frac{1}{2}$ ", Join 3-7

1-8 = $\frac{1}{4}$ " chest + 1 $\frac{1}{2}$ "

6-9 = 1", Shape scye 7-8-9



1-8 same as 2-10 plus $1\frac{1}{2}$ ", Join 10-8

10-11 = $\frac{1}{2}$ ", Shape bottom 2-11

Length of the opening at center front about $\frac{1}{4}$ " chest from 4.

Back

0-12 = $\frac{3}{4}$ "

Shape neck 3-12 and scye 7-13-8

Plain Sleeve

square lines from 0, fold at 0-2

0-1 = $\frac{1}{8}$ chest + $2\frac{1}{2}$ "

0-2 = sleeve length + $\frac{1}{4}$ "

2-3 same as 0-1. Join 1-3

1-4 = $\frac{1}{8}$ chest

0-5 = 1". Join 4-5

6 is the midway of 5-4

6-7 = $\frac{3}{4}$ "

Shape back side 4-7-5-0

Square up from 4-8

4-8 = 2", Join 5-8

Taking $\frac{1}{4}$ " above point 4, shape front side 4-8-9-0.

2-10 = $\frac{1}{2}$ sleeve around + $\frac{1}{2}$ "

Join and shape 4-10

Keep $1\frac{1}{4}$ " in turns at 2-10

Keep $\frac{3}{4}$ " inlays at 4-10

Flared frill

Take a square piece of paper 0-3-5-6, fold it diagonally on line 0-5, and draft as follows

Square line from 0

0-1 = $\frac{1}{4}$ arm circumference + 1"

Shape 1-2 with 0-1 radius (0-2 same as 0-1)

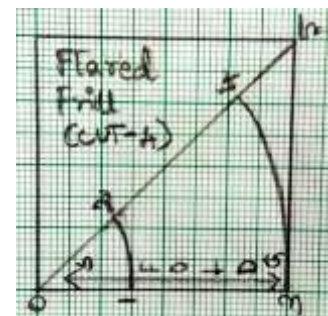
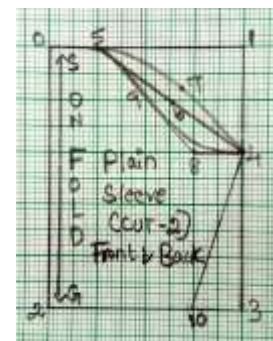
1-3 = full length + $\frac{1}{4}$ "

Shape 3-4 with 0-3 radius

Keep $\frac{3}{4}$ " below 3-4 for inside turning

Collar

Square lines from 0, fold at 0-1



0-1 = $1 \frac{1}{2}$ "

0-2 = half neckline + $\frac{1}{4}$ "

2-3 same as 0-1. Join 1-3

4 is the midway of 0-2

2-5 = $\frac{1}{2}$ ", Shape 4-5

3-6 = $\frac{1}{4}$ "

Join 5-6 and extend to 7

5-7 = $(0-1) - \frac{1}{4}$ ", Shape 1-7

2. Kurthi with straight pants

Kurthi

Front

Draw line 0-3 at a distance of 3-4" from the selvedge

0-1 = $\frac{1}{8}$ chest + 3"

0-2 = waist length + $\frac{3}{4}$ "

0-3 = full length + $\frac{3}{4}$ "

Square out from 1,2 and 3

0-4 = $\frac{1}{12}$ chest + $\frac{1}{4}$ "

0-5 = $\frac{1}{12}$ chest + $\frac{1}{4}$ "

shape 4-5

0-6 = shoulder + $\frac{1}{4}$ "

Square down from 6-7

6-8 = 1", join 4-8

7-9 = 1"

1-10 = $\frac{1}{4}$ chest + 2" or to taste

Shape scye 8,9,10

Square down from 10-11

11-12 = $\frac{3}{4}$ "

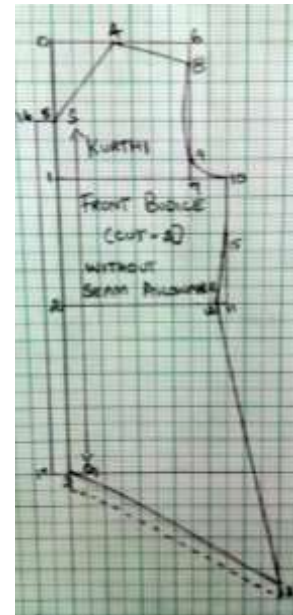
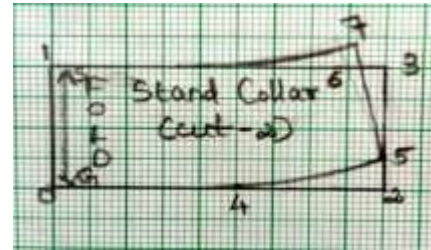
3-13 = $\frac{1}{4}$ " chest + 8-10"

Shape side seam 10, 12,13

10-15 = $\frac{1}{8}$ chest + $\frac{1}{2}$ "

5-16 and 3-17 = $1 \frac{1}{4}$ " - $1 \frac{1}{2}$ " each. Join 16-17

Keep $1 \frac{1}{4}$ " to $1 \frac{1}{2}$ " below 14-17 for in-turns.



$$2-3 = \frac{1}{2} (2-1) - 2''$$

Square out from 1,2 and 3

$$2-4 = \frac{1}{4} \text{ seat} + \frac{1}{2}'' \text{. Square up from 4-5}$$

4-5 same as 0-2

$$4-6 = \frac{3}{4}'' \text{. Join 5-6}$$

$$6-7 = \frac{1}{6} \text{ seat}$$

$$6-8 = \frac{1}{12} \text{ seat} - \frac{1}{2}''$$

$$6-9 = \frac{1}{2} (6-8) \text{. shape fork 7-8-9}$$

$$5-10 = \frac{1}{4} \text{ waist} + 1 \frac{1}{2}'' \text{ to } 2'' \text{ for pleat} + \frac{1}{2}'' \text{ for seams}$$

$$5-11 = \frac{1}{12} \text{ seat}$$

$$11-12 = 1 \frac{1}{2}'' \text{ to } 2'' \text{ for pleat}$$

13 is midway of 11 to 12

$$4-14 = \frac{1}{12} \text{ seat}$$

Square out from 14 to 15

$$4-16 = \frac{1}{12} \text{ seat}$$

Square down from 16 to 17-18

$$18-21 \text{ and } 18-22 = \text{each } \frac{1}{4} \text{ bottom}$$

$$8-23 = \frac{3}{4}'' \text{. Join 21-23}$$

Shape 8-19

$$17-20 \text{ same as } 17-19$$

Join 20-22. Shape side seam 10-15-20, neglecting point 2

Back

$$8-27 = 2''$$

$$19-28 \text{ and } 21-29 = \text{each } \frac{1}{2}'' \text{. Shape 27-28}$$

Join 28-29

$$28-30 \text{ same as } 8-19$$

31 is midway 6-8

$$4-32 = \frac{1}{4} \text{ waist} + 1 \frac{1}{2}''$$

Join 31-32 and produce to 33 -34

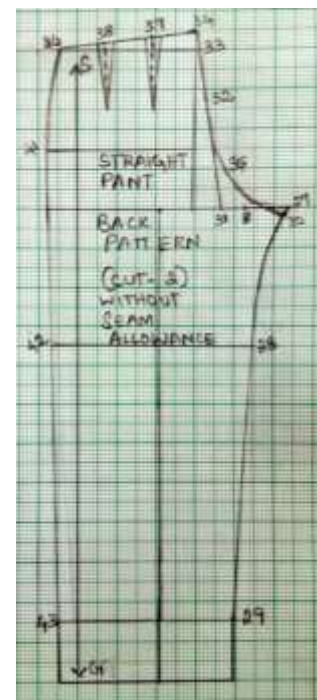
$$33-34 = 1 \frac{1}{4} \text{ to } 1 \frac{1}{2}''$$

Shape fork 34-35-30

$$34-36 = \frac{1}{4} \text{ waist} + 2''$$

Divide 34-36 in to 3 equal parts and take darts, $\frac{3}{4}''$ wide and $5-5 \frac{1}{2}''$

long, at 37 and 38.



15-41, 20-42 and 22-43 = each $\frac{1}{2}$ "

Shape side seam 36-41-42-43.

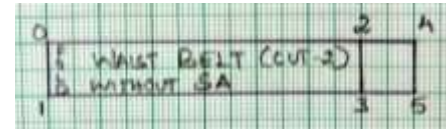
Waist belt

Square lines from 0

0-1 = $1\frac{1}{2}$ " or to taste

0-2 and 1-3 = same as waist

Keep 2" extra at 2-3



3. kaftan crop top with palazzo pant

Kaftan crop top

Front and Back

Fold at 0-2

0-1 = shoulder to waist + $\frac{1}{2}$ "

0-2 = shoulder width + 4"

0-1 same as 2-3

0-2 same as 1-3. Join the lines and make a rectangle.



Wrap Tie Back Rope

length = waist circumference + 60" + 1"

width = 4"

Palazzo pant

Front

Square lines from 0

0-1 = full length - belt-width + $\frac{1}{4}$ "

1-2 = inside leg + $\frac{1}{4}$ "

Square out from 2 and 1

1-3 = $\frac{1}{4}$ bottom

2-4 = same as 3-1

4-5 = $\frac{1}{6}$ seat - $\frac{1}{4}$ ", join 1-5

5-6 = $\frac{1}{4}$ seat

0-7 = same as 2-6

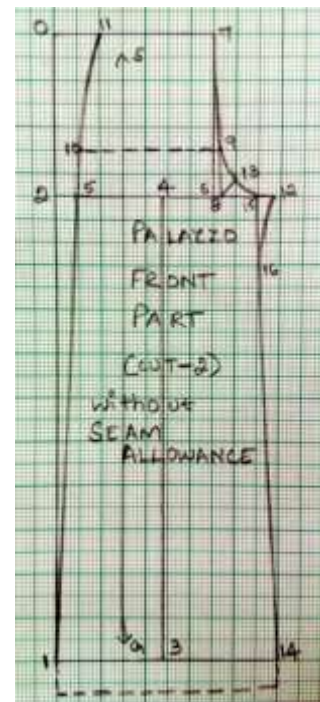
6-8 = $\frac{3}{4}$ ". Join 7-8

8-9 = $\frac{1}{12}$ seat

5-10 = same as 8-9

7-11 = $\frac{1}{4}$ waist + $\frac{1}{2}$ " for seams

Shape 10-5-11



8-12 = $\frac{1}{12}$ seat - 1"

8-13 = $\frac{1}{2}$ (8-12) + $\frac{1}{4}$ "

Shape 7-9-13-12

3-14 = 1-3

12-15 = $\frac{3}{4}$ ". Join 14-15

15-16 = $\frac{1}{8}$ seat. Shape 16-12

Back

12-17 = $\frac{1}{12}$ seat - 1"

15-18 = $1 \frac{1}{2}$ "

14-19 = 1"

Join 18-19.

Shape 20-17

18-21 = $\frac{1}{6}$ seat

From 15 produce to 22-23

22-23 = 1"

17-24 = $\frac{1}{2}$ "

Shape fork 21-12-24

23-25 = $\frac{1}{4}$ waist + $1 \frac{1}{2}$ "

Shape 25-5

Divide 25-23 into three equal parts and take darts, $\frac{3}{4}$ " wide and $3 \frac{1}{2}$ " long, at 27 and 28.

11-29 = $\frac{1}{6}$ seat for side opening, if required.

Keep $2 \frac{1}{2}$ " - $3 \frac{1}{2}$ " below 1-14 and 1-19 for in turns.

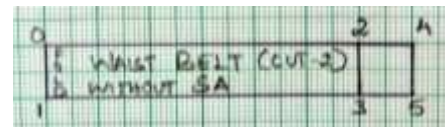
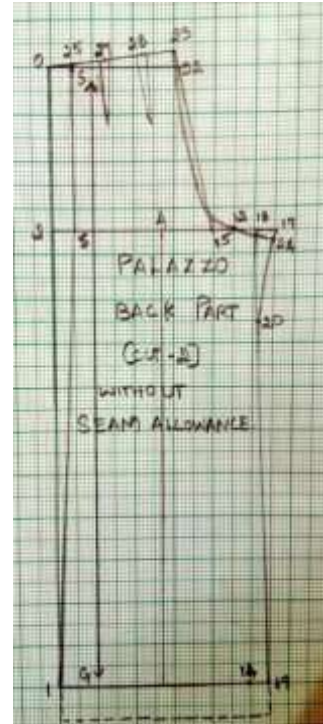
Waist belt

Square lines from 0

0-1 = $1 \frac{1}{2}$ " or to taste

0-2 and 1-3 = same as waist

Keep 2" extra at 2-3



4. Bodycon dress

Front

Square lines from 0

0-2 = bodice length

0-3 = $\frac{1}{12}$ chest

0-4 = $\frac{1}{8}$ chest

Shape neck 3-4 as needed

0-5 = shoulder + $\frac{1}{4}$ "

Square down from 5-6

5-7 = $\frac{3}{4}$ ". Join 3-7

6-8 = nearly 1"

1-9 = $\frac{1}{4}$ chest + 1 $\frac{1}{2}$ "

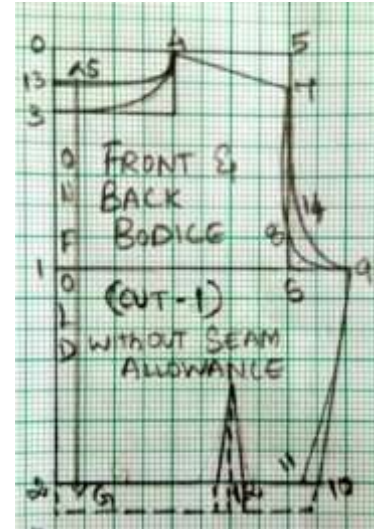
Shape scye 7-8-9

Square down from 9-10

10-11 = $\frac{1}{2}$ "

Shape side seam 9-11

11-12 = $\frac{3}{4}$ " for dart at 17



Back

0-20 = 1" or to taste

Shape neck 3-20 and scye 7-21-9

2-22 = $\frac{1}{12}$ chest

Take $\frac{1}{2}$ " dart at 22

Keep $\frac{3}{4}$ " – 1" inlays outside 9-12 of the front and 9-11 of the back

Skirt

Square lines from 0, fold at 0-2

0-1 = 1"

1-2 = skirt length + $\frac{1}{4}$ "

1-3 = 2 to 10 of the bodice – dart width at 15 + 3" (pleats)

Join and shape 1-3

2-4 = $\frac{1}{4}$ chest + 1"

Join 3-4

3-5 same as 1-2

6 is midway of 2-4

Shape bottom 5-6



Keep 1" below 2-6-5 for inside turning

Frills is to be attached at the bottom of the skirt.

Rolled up sleeve

square lines from 0, fold at 0-2

0-1 = $\frac{1}{8}$ chest + $2\frac{1}{2}$ "

0-2 = sleeve length + $\frac{1}{4}$ "

2-3 same as 0-1. Join 1-3

1-4 = $\frac{1}{8}$ chest

0-5 = 1". Join 4-5

6 is the midway of 5-4

6-7 = $\frac{3}{4}$ "

Shape back side 4-7-5-0

Square up from 4-8

4-8 = 2", Join 5-8

Taking $\frac{1}{4}$ " above point 4, shape front side 4-8-9-0.

2-10 = $\frac{1}{2}$ sleeve around + $\frac{1}{2}$ "

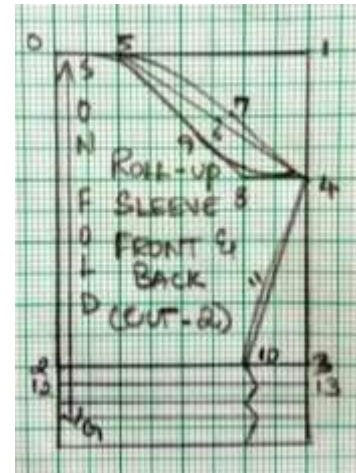
Join and shape 4-10

Keep $1\frac{1}{4}$ " in turns at 2-10

Keep $\frac{3}{4}$ " inlays at 4-10

2-12 and 3-13 = each 1". Join 12-13

Draw two parallel lines outside 12-13, the 1st at a distance of 1" and the second at a distance of $1\frac{3}{4}$ ". When stitching, take a fold on line 12-13 and the finished fold will come on line 2-10.



5. Skirt and top

Top

Back

Square lines from 0, fold at 0-4

0-1 = $\frac{1}{8}$ chest + $2\frac{1}{2}$ "

0-2 = waist length

0-4 = full length, Square out from these points

0-5 = $\frac{1}{12}$ chest + $\frac{1}{4}$ "

0-6 = 1", Shape neck 5-6

0-7 = shoulder + $\frac{1}{4}$ ". Square down from 7-8

7-9 = 1", Join 5-9

1-11 = $\frac{1}{4}$ chest + $1\frac{1}{2}$ "



Shape scye 9-10-11

Square down from 11-12

14-15 = $\frac{3}{4}$ "

4-12 = $\frac{1}{4}$ chest + $1\frac{1}{2}$ "

Shape side seam.

Front

Square lines from 0, fold at 0-4

0-1 = $\frac{1}{8}$ chest + $2\frac{1}{2}$ "

0-2 = waist length + $\frac{3}{4}$ "

0-4 = full length + $\frac{3}{4}$ "

Square out from all these points

0-5 = $\frac{1}{12}$ chest + $\frac{1}{4}$ "

0-6 = 1"

Shape neck 5-6

0-7 = shoulder + $\frac{1}{4}$ "

Square down from 7-8

7-9 = 1". Join 5-9

8-10 = 1"

1-11 = $\frac{1}{4}$ " chest + $1\frac{1}{2}$ "

Shape scye 9-10-11

Square down from 11 to 12

12-13 = $\frac{3}{4}$ "

4-15 = $\frac{1}{4}$ chest + $1\frac{1}{2}$ "

Shape side seam 11-13-15

Peter pan collar

4-1-3 = neckline of front and back

3-5 = collar width + 1"

1-6 and 4-7 = collar width + $\frac{1}{2}$ " for seams

Shape 5-6-7

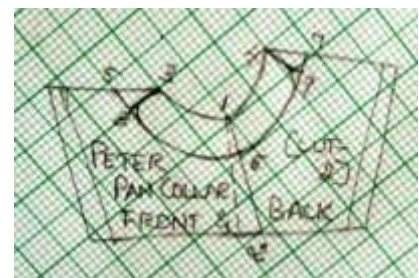
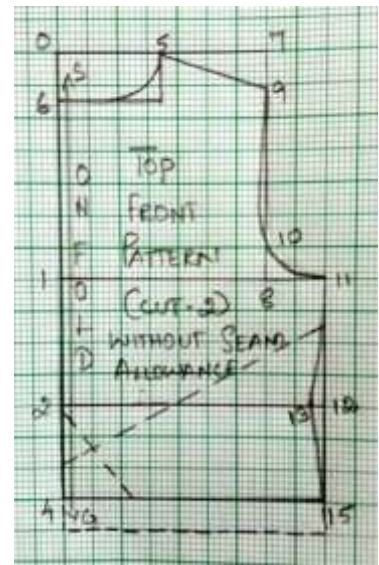
5-8 and 7-9 = $\frac{3}{4}$ " each

Shape outer edge 3-8-6-9-4.

Plain sleeve

Square lines from 0, fold at 0-2

0-1 = $\frac{1}{8}$ chest + $2\frac{1}{2}$ "



0-2 = sleeve length + $\frac{1}{4}$ "

2-3 same as 0-1. Join 1-3

1-4 = $\frac{1}{8}$ chest

0-5 = 1". Join 4-5

6 is the midway of 5-4

6-7 = $\frac{3}{4}$ "

Shape back side 4-7-5-0

Square up from 4-8

4-8 = 2", Join 5-8

Taking $\frac{1}{4}$ " above point 4, shape front side 4-8-9-0.

2-10 = $\frac{1}{2}$ sleeve around + $\frac{1}{2}$ "

Join and shape 4-10

Keep 1 $\frac{1}{4}$ " in turns at 2-10

Keep $\frac{3}{4}$ " inlays at 4-10

Pleated skirt

Take 2 folds of material, one for the front and the other for the back, with a fold at 0-2

0-1 = 1 $\frac{1}{4}$ "

1-2 = length – belt width + $\frac{1}{4}$ " for seam

0-3 = $\frac{1}{4}$ bottom + $\frac{1}{2}$ "

2-4 = same as 0-3. Join 3-4

3-5 = 1 $\frac{1}{4}$ "

Join and shape 1-5

6 is the midway of 2-4

5-7 = same as 1-2. Shape 6-7

1-8 = 1 $\frac{1}{4}$ "

8-9 = 5" for pleat

9-10 = 2 $\frac{1}{2}$ "

10-11 = 5" for pleat

Mark 8, 9, 10 and 11 for pleats

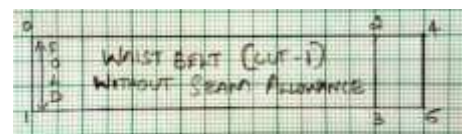
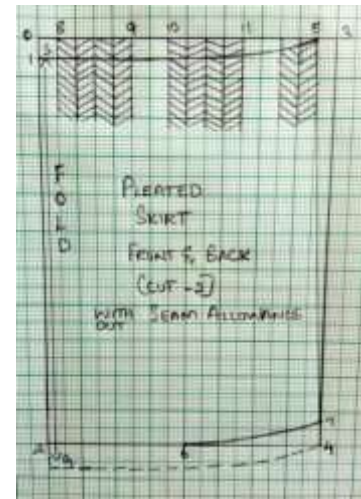
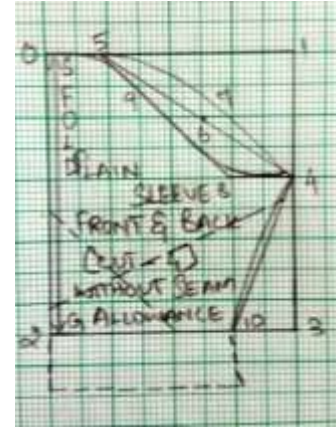
5-12 = $\frac{1}{6}$ waist, for side opening

Keep 1 $\frac{1}{2}$ " to 2", below 2-6-7 for inside turning

Waist belt

Square lines from 0

0-1 = 1 $\frac{1}{2}$ " or to taste



0-2 and 1-3 = same as waist

Keep 2" extra at 2-3

3.5.2 Sample Preparation using Muslin

Prototyping is the creation of a model or a mock-up of a design to test various aspects of the idea, (Asplund, 2015). Often called 'draping on the stand' is a pattern cutting method which involves muslin fabric for fitting of block garment generally on a designated dummy body of appropriate size. Mock-up or muslin is also referred as 'toile'. Toile is usually not neatly finished or hemmed like the actual garment would be, and they are made from a translucent cotton or linen fabric so that the design can be tested and perfected. Each component is transferred onto pattern paper and the required allowances added (Bikash and Seal, 2018)

3.5.2.1 Selection of Material

Muslin patterns were patterns made out of light weight fabric to check out its ease, fit and comfort for the wearers (Thomas, 1998). Muslin patterns lay the foundation of an effective dress designing, apart from that they also prevent wastage of material, energy, time and also money. The fabric used for dresses should be close weave, form and smooth yarns. Hence the investigator selected 100% cotton plain weave fabric for stitching the muslin pattern. The selected fabric was thoroughly washed, dried and pressed before cutting. The selected swatch of muslin is presented in the Appendix – D (a).

3.5.2.2 Laying, Marking and Cutting

Layout is placing the patterns on fabric in an economic way. Cost is much important hence economical lays are required. Patterns are placed in the fabric with seam allowances in a economical way. Then the pattern outlines are transferred on to the fabric with tailor's chalk in a traditional and direct way. Perfect cutting will make the stitching much easier. The fabric is laid on the table without any fold or crease. The fabric was marked with patterns, then the paper patterns were removed and the fabric was cut carefully. During cutting process special care was taken in going along the marked edges without any deviation. At the most, care was taken to make long slashes to ensure the neat seam finish. Notches are also given at the appropriate points in order to ensure seamless sewing. The cut pieces were folded and kept aside for sewing.

3.5.2.3 Construction

Garment construction refers to the stitching of garments and involves all the sewing techniques in the process. Having a strong understanding of construction will help you to become more confident in handling your sewing projects. To check the overall fitting, the investigator chose to construct any two garments with muslin. The selected garments were constructed following the principles and techniques of sewing.

A-Line Dress

- Attach the shoulder line of front and back.
- Construct the stand collar with particular interfacings done along and attach the collar around to the front and back neck.
- This A-line dress has got an extra bottom frills. Take the required material as per the design and make frills and attach it to front and back bottom of the garment.
- Then it has got another frilled portion which comes below the bust, only to the right side of the front bodice and stands along the waist line till lower thigh.
- Finish the centre front for attaching the button and button hole
- Attach the sleeves.
- Sew the side seam.
- Hem the sleeve and bottom edge, trim the excess threads at edges.

Kurthi and Straight Pants

- Draw the shape of your desired neckline on to the interfacing and sew them along the edges to finish neckline.
- Sew the shoulders together and create a back neckline
- Attach the sleeves
- Finish the edges of center front opening of the kurthi.
- Attach ropes to the required points on kurthi.
- Sew the side seam
- Hem the edges of sleeve and bottom round of kurthi

Straight Pants

- Sew the darts and pleats of the front and back pieces of pant.
- Sew the crotch of front and back pieces
- Sew the side seams and inside leg length of the pants
- Finally sew the pants with waist band and attach fastners.
- Hem the bottom round

3.5.2.4 Evaluation and Fitting

‘Clothing which fits, provides a neat and smooth appearance and will allow maximum comfort and mobility for the wearer’ – Shen and Huck (Simona et.al, 2015). The constructed muslin garments were evaluated for fitness by trying them out on a dress form which has got body measurements nearer to the standardised body measurements. A Proforma was used to collect information directly from the selected 10 textile experts regarding their satisfaction about each and every measurement of muslin garments. The details are given in the Chapter: Results and Discussion.

In order to evaluate the fitness of the constructed muslin patterns, ten judges comprising staff and students of Textiles and Clothing Department, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, were selected as they had enough knowledge on Textiles and Clothing field. A Proforma was prepared and given to the selected judges. They were requested to evaluate the constructed muslin patterns by checking the fit on the dress form which has got the body measurements nearer to the standardised body measurements. The data thus collected were consolidated and presented in the Chapter: Results and Discussion. Based on the evaluation, the necessary alterations were incorporated in the final garments. The Proforma used for evaluation are given in the Appendix – E.

3.6 Final Garment Making

Construction of garment is a beautiful art, which requires skill of sewing which is essential to convert the design on paper in to garment. It has got both technical and design issues, like the designer can choose where to construct lines, pockets, plackets, collars, sleeves and how to finish the edges and to create a good look and experience for the wearer. A garment is constructed by cutting the fabrics into parts according to a pattern which fits the human form then the different parts are joined together by sewing techniques (Murugesan, 2020). The investigator constructed

five different styles of Indo western formal outfit, A-Line dress, kurthi with straight pants, kaftan crop top with palazzo pant, bodycon dress and top and skirt.

3.6.1 Selection of fabric for Sewing

For this research the investigator selected Madurai Sungudi fabric and Indian traditional Khadi fabric. As Khadi is a Handloom fabric, they are generally made with high quality natural fibers like cotton, linen, silk, and wool which are resilient and last for a long time. Sungudi made up of cotton, which is comfortable to wear, good absorbent and washed easily. In order to enrich both the traditional fabric in youth generation the investigator choose these two fabrics for garment construction.

3.6.2 Preparation of Fabric for Cutting

According to the pattern alterations, the amount of fabric required was calculated and purchased from local market. The purchased fabrics were ironed and pressed well and neatly without any shrinkage or folds. Then the fabric was laid on table without any fold or crease.

3.6.3 Cutting

The patterns were placed up on the fabrics and pinned up firmly. Carbon paper and tracing wheel were used for marking on the fabric. Cutting was done by taking long even strokes right on the marked lines of the pattern. All the details on the pattern were transferred in the fabric using a tracing wheel and marked the points and gave slits and notches to identify the suitable fabric quickly.

3.6.4 Sewing

The selected five sets of garments were constructed very carefully following the principles and techniques of sewing.

3.6.4.1 Sewing Procedure for A-Line dress

- Attach the shoulder line of front and back bodice.
- Construct the stand collar with particular interfacings done along and attach the collar around to the front and back neck.
- This A-line dress has got an extra bottom frills. Take the required material as per the design and make frills and attach it to front and back bottom of the garment.

- Then it has got another frilled portion which comes below the bust, only to the right side of the front bodice and stands along the waist line till lower thigh.
- Finish the centre front for attaching the button and button hole
- Attach the sleeves.
- Sew the side seam.
- Hem the sleeve and bottom edge.
- Trim the excess thread.
- Fasteners were attached.

3.6.4.2 Sewing Procedure for Kurthi and Straight pant

- Draw the shape of your desired neckline on to the interfacing and sew them along the edges to finish neckline.
- Sew the shoulders together and create a back neckline
- Attach the sleeves
- Finish the edges of center front opening of the kurthi.
- Attach ropes to the required points on kurthi.
- Sew the side seam
- Hem the edges of sleeve and bottom round of kurthi
- Fasteners were attached.

Straight pants

- Sew the darts and pleats of the front and back pieces of pant.
- Sew the crotch of front and back pieces
- Sew the side seams and inside leg length of the pants
- Attach the designed patch pocket.
- Finally sew the pants with waist band and attach fasteners.
- Hem the bottom round

3.6.4.3 Sewing Procedure for Kaftan Top and Palazzo

Kaftan top

- Sew the raw edges on both the sides of the fabric (length wise)
- Make frills at the bottom of the bodice front and back
- Sew the base of the front bodice for about 4”
- Sew the sides from the bottom of about 3-5”
- Sew the waist rope all around the crop top, leaving rope to tie at the back.

Palazzo pant

- To the right side of the front pant piece from the knee sew it with the frilled piece to the bottom edge of the pant separately
- Attach the ruffle piece to the right side front part of the pant.
- Sew the crotch of the front and back separately.
- Attach the side seams of the pants
- Sew welt pocket to the pant
- Attach waist belt.
- Finish the pant with attaching fastners.
- Do trimming finally

3.6.4.4 Sewing Procedure for Bodycon dress

- Sew the shoulder of front and back bodice
- Finish the neckline with interfacings
- Makes pleats to the bottom parts and attach them to the bodice front and back.
- Attach the sleeves
- Sew the side seams
- To the bottom of the skirt part attach a frilled layer all around
- Add zippers at the back of bodycon dress.
- Finish the garment with trimming and by attaching fastners

3.6.4.5 Sewing Procedure for Top and Skirt

Top

- Add lining to the front and back bodice separately.
- Attach the shoulder line of the bodice.
- With the drawn interfacings sew the peter pan collar along the neckline.
- Attach the sleeves constructed to the armhole of the bodice.
- Join the side seams.
- Finish the garment with fasteners and trims.

Skirt

- Take the front and back skirt part and make box pleats equally and sew all around the fabric.
- Attach lining to the front and back piece of skirts separately
- Attach the skirt with upper layer of cut fabric
- And attach welt pockets to the upper part of the skirt
- Now sew the waist band to the skirt
- Attach zipper to the side of skirt
- Do the trimmings and finish it with fastener.

3.7 Fit Analysis and Subjective Evaluation

3.7.1 Fit Analysis

Garment fit on body model is an important factor for designing comfortable, functional and well-fitting garments. 'Fit is defined as the ability to be the right shape and size' – The Oxford Dictionary. Fitting a garment to body contours is one of the key properties besides the design and quality of the fabric used and evaluated by the end-user. From the aesthetic point of view, garments fulfill the criteria according to the wishes of the fashion trends. From the functional point of view, clothing fit is mostly observed with respect to clothing comfort, (Simona, 2015).

Evaluation of garment fit to the body could be done on a live, scanned or parametric human body model. However, the assessment of garment fit to the body should be the same for a real and virtual garment, (Bye and McKinney, 2010)

In order to evaluate the fitness of the garments, ten judges comprising staff and students of Textiles and Clothing Department, Avinashilingam Institute for home science and higher education for Women, Coimbatore, were selected as they had enough knowledge about Textiles and Apparel designing. A Proforma was prepared and given to the selected judges. They were requested to evaluate the constructed garments by checking the fit on the dress form which has got the measurements nearer to the standardized body measurements. The data thus collected was consolidated and presented in the Chapter: Results and Discussion.

3.7.2 Subjective Evaluation

Proforma given in the Appendix – F was used for evaluating the final garments and the results are presented in results and discussion.

PLATE – VI – FINALIZED GARMENT DESIGNS



PLATE – VII
CONSTRUCTED FINAL GARMENTS



A-LINE DRESS – STYLE 4



KURTHI AND STRAIGHT PANT – STYLE 1



KAFTAN TOP AND PALAZZO – STYLE 3



BODYCON DRESS – STYLE 2



TOP AND SKIRT – STYLE 3

4. RESULTS AND DISCUSSION

The findings of the research have been illustrated with the help of Tables, and Figures they are discussed under the following headings;

4.1 Class Intervals of Body Measurements

4.1.1 Standardized Measurements for Final Study

4.2 Results of Survey

4.2.1 Demographic Details

4.2.2 Details on Adult Girl Preferences about Madurai Sungudi Art

4.2.3 Details On the Interest of Adult Girls in Incorporating Sungudi and Handloom Fabrics in Indo Western Formal Wear

4.2.4 Details on the Preference of the Type of Silhouette for Indo Western Formal Wear

4.2.5 Details on the Preference of Motif and Fabric

4.2.6 Details on the Selection of Colours for Indo Western Formal Outfit

4.2.7 Budget Details of Indo Western Formal Outfit

4.2.8 Details on Preference of Fastener

4.2.9 Details on their Interest Towards Recreating Indo Western Formal Wear Using Sungudi and khadi Fabric

4.3 Evaluation and selection of Manual Garment Designs

4.4 Evaluation of the Constructed Muslin Garments

4.5 Evaluation of the Constructed Final Garments

4.5.1 Evaluation of the Constructed A-Line Dress

4.5.2 Evaluation of the Constructed Kurthi and Straight Pant

4.5.3 Evaluation of the Constructed Kaftan Top and Palazzo

4.5.4 Evaluation of the Constructed Bodycon Dress

4.5.5 Evaluation of the Constructed Top and Skirt

4.6 Cost Estimation

4.1 Class Intervals of Body Measurements

The body measurements of 50 girls in the age group between 20-25 years were taken randomly from Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore. The data collected were grouped based on suitable class intervals to find out the

standardized measurements and are presented in Table - IV. These are further consolidated and used for drafting and making patterns for the selected styles.

TABLE - IV
GROUPED BODY MEASUREMENTS OF THE ADULT GIRLS

S.No	Body Measurements	Range (cm)	Number of Adult Girls
1.	Chest	60-65 65-70 70-75 75-80 80-85 85-90 90-95 95-100 100-105	3 0 0 7 12 13 8 4 3
2.	Waist	55-60 60-65 65-70 70-75 75-80 80-85 85-90	12 0 8 15 9 3 3
3.	Hip	75-80 80-85 85-90 90-95 95-100 100-105 105-110	6 5 8 15 9 3 3
4.	Neck circumference	30-33 33-36 36-39 39-42 42-45	0 36 14 0 0
5.	Shoulder	30-32 32-34 34-36 36-38 38-40	0 6 23 0 21

6.	Front Waist length	25-30 30-35 35-40	0 43 7
7.	Back Waist Length	33-36 36-39	42 8
8.	Shoulder to Bust	20-22 22-24 24-26	0 43 7
9.	Armscye	30-33 33-36 36-39 39-42 42-45 45-48 48-51	0 26 9 4 6 2 6
10.	Upper Arm Circumference	20-25 25-30 30-35 35-40 40-45	7 10 22 8 3
11.	Elbow circumference	20-22 22-24 24-26 26-28 28-30 30-32 32-34	3 0 15 15 30 15 2
12.	Wrist	15-17 17-19 19-21	18 26 6
13.	Full sleeve length	55-57 57-59 59-61	11 36 3
14.	Waist to hip	20-21 21-22 22-23 23-24	7 0 35 8

15.	Ankle circumference	20-22 22-24 24-26	3 13 34
16.	Shoulder to hip	45-48 48-51 51-54 54-57 57-60 60-63	0 17 15 9 8 1
17.	Shoulder to knee	83-86 86-89 89-92 92-95	6 11 25 8
18.	Shoulder to ankle	125-130 130-135 135-140 140-145 145-150	6 13 5 16 10
19.	Crotch length	0 20-25 25-30	0 38 12

- **Chest:** The chest measurements were taken and grouped with the class interval of five and it is clear that out of 50 girls, the highest value of 13 girls falls under the class interval of 85-90 cm.
- **Waist:** The waist measurements were taken and grouped with the class interval of five and it is clear that out of 50 girls, the highest value of 15 girls falls under the Class interval of 70-75 cm.
- **Hip:** The hip measurements were measured and grouped in class intervals of five and it is found that the highest value of 15 girls falls under the class interval of 90-95cm.
- **Neck circumference:** The Neck circumference measurements were taken and grouped in class intervals of three and it is found that the highest value of 36 girls fall under the class interval of 33-36 cm.
- **Shoulder:** The Shoulder measurements were taken and grouped them in class intervals of two and it is found that the highest value of 23 girls falls under the class interval 34-36cm.

- **Front Waist length:** The Front waist length measurements were collected and grouped them in class intervals of five and it is found that the highest value of 43 girls falls under the class interval of 30-35cm.
- **Back waist length:** The back waist length measurements were taken and grouped them in class intervals of three and it is found that the highest value of 42 girls falls under the class interval of 30-35cm and only eight girls fall under the class interval of 36-39.
- **Shoulder to bust:** The shoulder to bust measurements were taken and grouped in class intervals of two and it is found that the highest value of 43 girls falls under the class interval of 22-24 cm.
- **Arm scye:** The arm scye measurements were collected and grouped in class intervals of three and it is found that the highest value of 26 girls falls under the class interval of 33-36cm.
- **Upper arm circumference:** The upper arm circumference measurements were collected and grouped in class intervals of five and it is found that the highest value of 22 girls falls under the class interval of 30-35cm.
- **Elbow circumference:** The elbow circumference measurements were collected and grouped in class intervals of five and it is found that the highest value of 30 girls falls under the class interval of 28-30cm.
- **Wrist:** The wrist measurements were collected and grouped them in class intervals of two and it is found that the highest value of 26 girls falls under the class interval of 17-19cm.
- **Full sleeve length:** The full sleeve length measurements were collected and grouped them in class intervals of two and it is found that the highest value of 36 girls falls under the class interval 57-59cm.
- **Waist to hip:** The waist to hip measurements were collected and grouped them in class intervals of one and it is found that the highest value of 35 girls falls under the class interval of 22-23cm.
- **Ankle circumference:** The ankle circumference measurements were collected and grouped them in class intervals of two and it is found that the highest value of 34 girls falls under the class interval of 24-26cm.
- **Shoulder to hip:** The shoulder to hip measurements were collected and grouped them in class intervals of three and it is found that the highest value of 17 girls falls under the class

interval of 48-51cm.

- **Shoulder to knee:** The shoulder to knee measurements were collected and grouped in class intervals of three and it is found that the highest value of 25 girls falls under the class interval of 89-92cm.
- **Shoulder to ankle:** The shoulder to ankle measurements were collected and grouped in class intervals of five and it is found that the highest value of 16 girls falls under the class interval 140-145cm.
- **Crotch length:** The crotch length measurements were collected and grouped in class intervals of five and it is found that the highest value of 38 girls falls under the class interval of 30-35cm followed by 12 girls under the class interval of 25-30cm.

4.1.1 Standardized Measurements for Final Study

The standardized body measurements were consolidated and given in Table – V.

TABLE – V
Standardized Body Measurements

S.No	Body part	Standardized body Measurements (cm)
1	Chest	85.83
2	Waist	72.69
3	Hip	92.69
4	Shoulder width	34.85
5	Front waist length	33.02
6	Back waist length	35.11
7	Neck circumference	34.86
8	Shoulder to bust	22.01
9	Arm scye	33.81
10	Upper arm circumference	32.6
11	Elbow circumference	31.03
12	Wrist circumference	17.02
13	Full sleeve length	58
14	Shoulder to hip	49.75

15	Shoulder to ankle	143.33
16	Shoulder to knee	91.03
17	Waist to hip	22
18	Waist to ankle	94.6
19	Ankle circumference	24.9
20	Crotch length	22.03

4.2 Results of the Survey

Firstly, the researcher approached 105 persons selected through random sampling, of age 20-25 adult girls. The number of the respondents who keenly participated in the survey were 105. Finally selected 105 questionnaires for the study as they were complete in all aspects.

4.2.1 Demographic Details

The demographic details comprise general information like age and educational qualification of the respondents in this study. The number of participants was above 100 at the age of 20-25. The demographic details of adult girls of 20-25 years are represented in Table-VI.

TABLE VI
Demographic Details of the Adult Girls

Characteristics	Frequency	Percentage %
Age	Years	
Below 20	13	12.4
20-25	84	80
25-30	5	4.6
30-40	3	3
Educational Qualification		
Student	82	82
Working	18	18
Location		
Urban	56	53.3
Rural	49	46.7



FIGURE 3
DEMOGRAPHIC DETAILS OF THE ADULT GIRLS

Table – VI and Figure 3 describe that the age of respondents ranges 20-25 years, below 20 and also above 25. Among the overall respondents 80% fall under 20-25 years, 12% below 20 years. Whereas, 5% and 3% ranges 25-30 years and 30-40 years respectively. 82% of the respondents were students and 18% were working. About 53.3% of the respondents were from urban area and 46.7% from rural area.

4.2.2 Details of Adult Girls preference for Madurai Sungudi Art

The results of the survey furnish the information collected from the respondents fall between the age group 20 and 25 years is presented in Table – VII

TABLE VII

(a) Details of Adult Girls Preference for Madurai Sungudi Art

S.No	Knowledge on Madurai Sungudi Art	Frequency	Percentage
1	Yes	70	67.6
2	No	20	18.1
3	Maybe	15	14.3

(b) Details of Adult Girls Preference for Wearing Indo Western Formals out of Sungudi Fabric

S.No	Wearing Indo Western formals out of sungudi fabric	Frequency	Percentage
1	Yes	64	61
2	No	6	6.7
3	Maybe	35	33.3

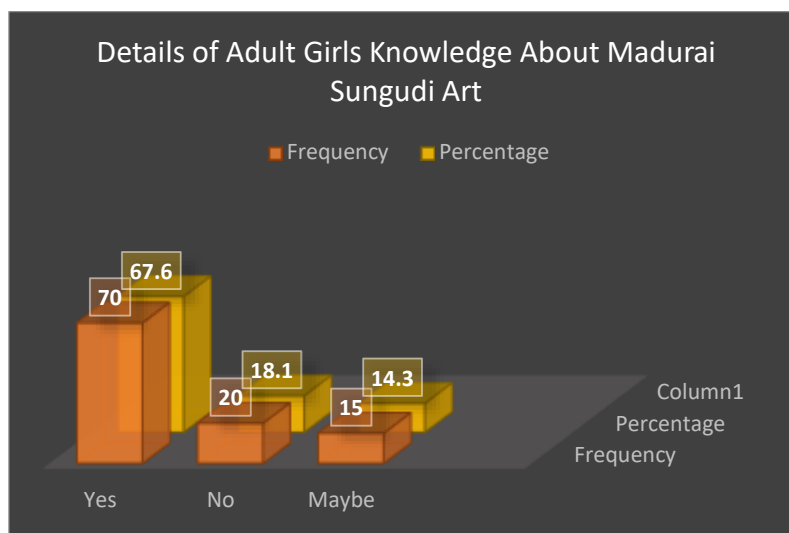


FIGURE 4 (a)

Details of Adult Girls Preference for Madurai Sungudi Art

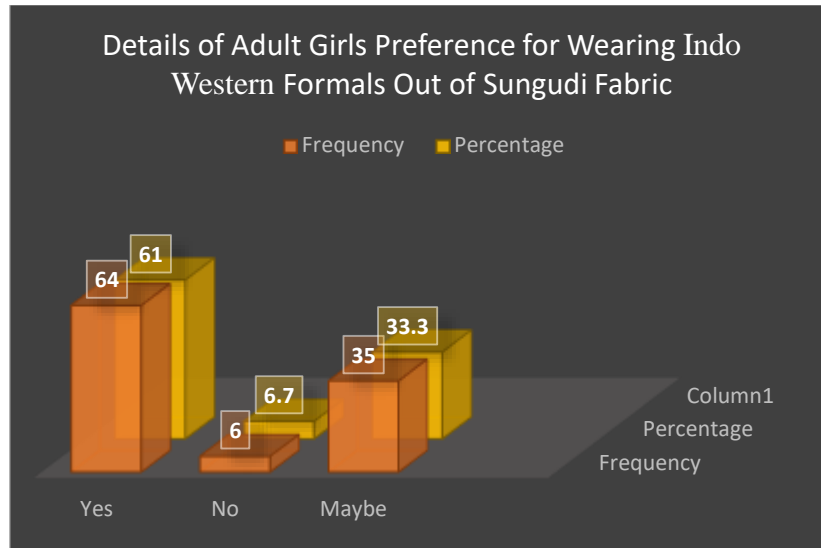


FIGURE 4 – (b)

Details of Adult Girls Preference for Wearing Indo Western Formals out of Sungudi Fabric

From the Table - VII and figure 4 (a) it is clear that 68 percent of the respondents have got knowledge about Madurai sungudi art, whereas 18 percent of respondents had no idea about Madurai sungudi art and remaining 14 percent of respondents expressed that they might know about Madurai sungudi art. From the Table – VII and Figure 4 (b) it is clear that 61 percent of respondents prefer wearing Indo Western formals out of sungudi fabric, 33 percent of respondents expressed that they might wear Indo Western Formals out of sungudi fabric and the remaining 7 percent respondents do not prefer wearing Indo Western formals out of sungudi fabric. Hence it could be concluded that the majority of the respondents has got knowledge about Madurai sungudi art and the respondents prefers wearing Indo Western formals styled out of sungudi fabric.

4.2.3 Details on the Interest of Adult Girls in Incorporating Sungudi and Handloom Fabrics in Formal Wear

The results of the survey furnish the information about adult girls interest on incorporating sungudi in Indo Western formal wear and their usage of handloom garments in their daily life. The details regarding their preference are given in the Table – VIII

TABLE – VIII

(a) Adult Girls Interest in Incorporating Sungudi in Indo Western Formal Wear

S.No	Interest in Incorporating Sungudi in Indo Western Formal Outfit	Frequency	Percentage
1	Yes	81	77.1
2	No	8	7.6
3	Maybe	16	15.2

(b) Usage of Handloom Garments

S.No	Usage of handloom garments	Frequency	Percentage
1	Always	3	2.9
2	Often	15	14.3
3	Occasionally	67	63.8
4	Never used	20	19

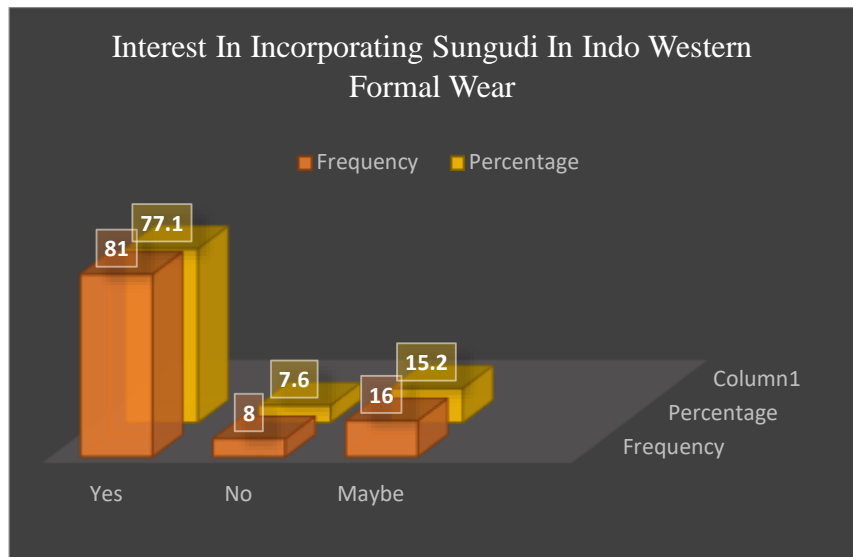


FIGURE – 5 (a)

Adult Girls Interest in Incorporating Sungudi in Indo Western Formal Wear

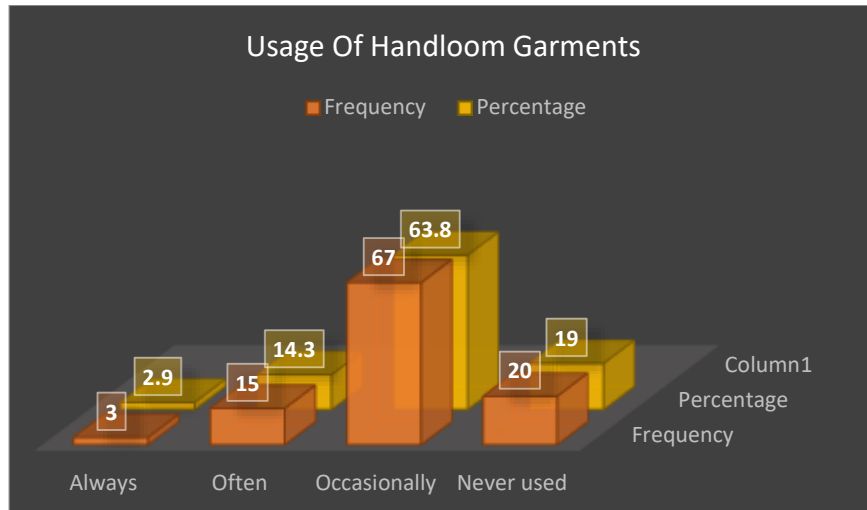


FIGURE – 5 (b)

Usage of Handloom Garments

From the Table VIII and Figure 5 (a) it is clear that 77 percent of respondents are interested in incorporating sungudi in Indo Western formal outfit, 15 percent of the respondents might be interested and the remaining 8 percent of samples were not interested. From the Table VIII and Figure 5 (b), the data conveys that around 64 percent of respondents occasionally used handloom garments, 19 percent of samples never used, whereas 14 percent of samples often uses handloom garments. It was interesting to note that 3 percent of respondents are regularly using the handloom garments. Therefore, it could be concluded that majority of samples were interested in incorporating sungudi in Indo Western formal outfit and they have been using the handloom garments occasionally.

4.2.4 Details on the Preference of Silhouette for Formal Wear

The details about the preferences of adult girls in selection of the type of silhouette for Indo Western formal wear and their preferences on western outfit were consolidated and given in Table – IX and Figure 6 (a) and (b).

TABLE – IX

(a) Preference of Silhouette for Indo Western Formal Wear

S.No	Silhouette for Indo Western Formal Wear	Frequency	Percentage
1	A line silhouette	42	40
2	Hourglass silhouette	38	36.2
3	Peplum silhouette	14	13.3
4	Shirt silhouette	11	10.5

(b) Adult Girls Preference on Western Outfit

S.No	Preference on western outfit	Frequency	Percentage
1	A-line dress	35	32.4
2	Solid shirt and trousers	12	11.1
3	Formal blouses	10	8.3
4	Tops and palazzo	40	40.1
5	Blazers	10	8.1

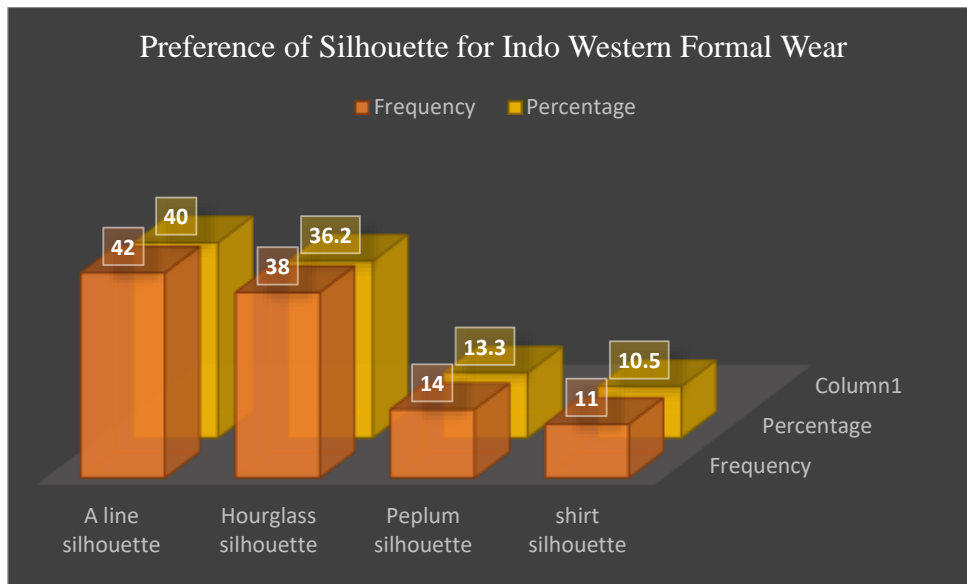


FIGURE – 6 (a)

Preference of Silhouette for Indo Western Formal Wear

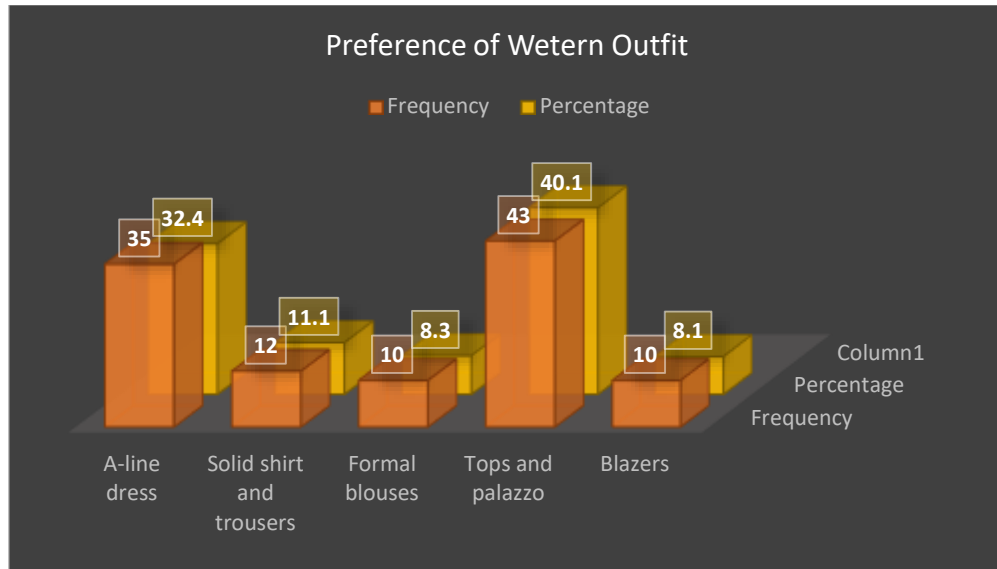


FIGURE – 6 (b)

Adult Girls Preference on Western Outfit

From Table – IX, Figure – 6 (a) it is clear that 40 percent of respondents prefer A-Line silhouette and around 36 percent of respondents prefer hourglass silhouette. Whereas 13 percent and 10 percent of respondents prefer peplum kind of silhouette and shirt silhouette respectively. From Table – IX and Figure 6 (b) it is clear that around 40 percent of respondents prefer tops and palazzo, 32 percent samples prefer A-Line dress and 11 percent of samples prefers to wear solid shirt and trousers. While, 8 percent of respondents prefer to wear formal blouses and blazers. From the above data (Figure 6 – a) it is understood that majority of respondents prefer to wear A-Line silhouette and hourglass silhouette. From the above data it is understood that most of the respondents prefer to wear A-Line, Hourglass and Palazzo’s, as these styles are trending at present and are more comfortable for Indo Western Formal wears.

4.2.5 Details on the Preference of Motif and Fabric

The preference for the motif and fabric was collected from 105 respondents, the data thus collected is presented in Table – X and Figure 7 (a) and (b).

TABLE – X

(a) Details on preference of motif

S.No	Preference of Motif	Frequency	Percentage
1	Traditional dots	21	20
2	Modern motifs	20	19
3	Both	64	61

(b) Details on Preference of Fabric

S.No	Preference of Fabric	Percentage
1	Handloom fabric	35.2
2	Machine made fabric	9.5
3	Both	55.2

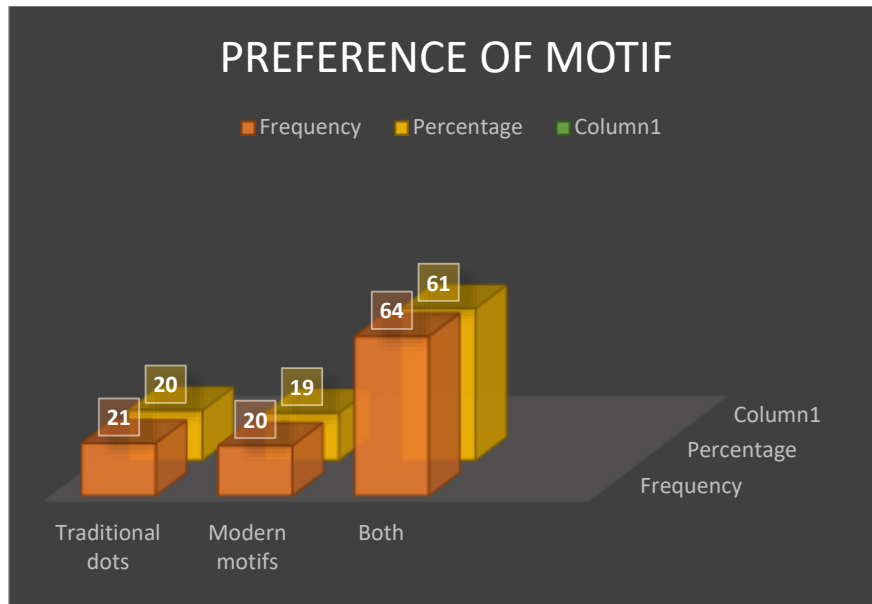


FIGURE – 7 (a)

Details on Preference of Motif

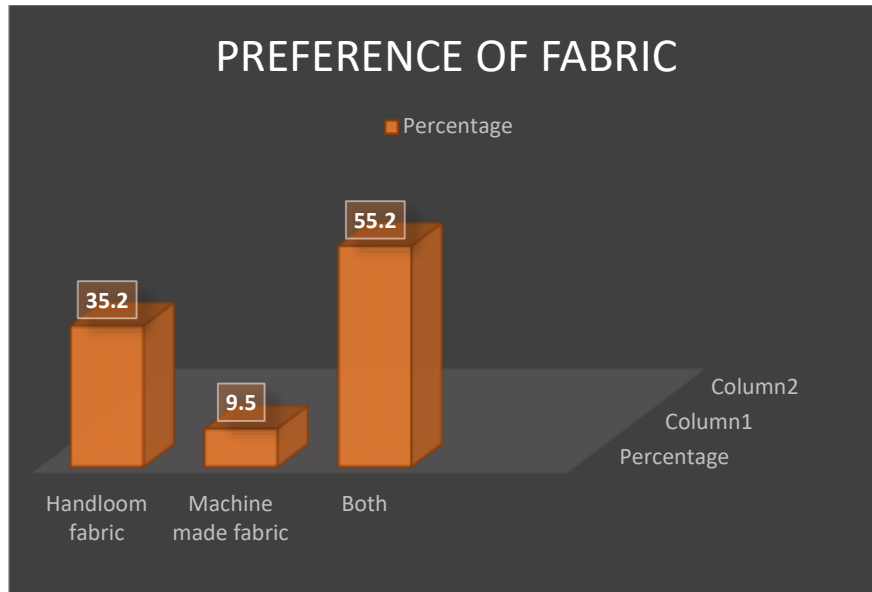


FIGURE – 7 (b)
Details on Preference of Fabric

Table – X and Figure 7 (a) clearly states that 61 percent of respondents preferred both traditional dots and modern motifs. Whereas, 20 percent and 19 percent of respondents preferred traditional dots and modern motifs respectively. Then, from the Figure – 7 (b) it is clear that about 55 percent of samples preferred both handloom and machine made fabrics, 35 percent of samples preferred handloom fabric only. While 10 percent of respondents preferred machine made fabrics. Hence, we could conclude that the majority of samples preferred both traditional dot motif and modern motif together. Hence the investigator selected both type of motif and both type of fabric in to consideration.

4.2.6 Details on the Selection of Colour for Formal Outfit

The details about colour preference and the number of adults preferring their choice for Indo Western formal wear are given in Table – XI and Figure 8.

TABLE – XI (a)

S.No	Colour Preferences	No Of Subjects Interested
1	Bright Colours	20
2	Dull Colours	8
3	Pastel Colours	43
4	Fluorescent Colours	7
5	Bright colours, Dull colours	3
6	Bright Colours, Fluorescent Colours	4
7	Bright Colours, Pastel Colours	9
8	Dull Colours, Pastel Colours	9
9	Pastel Colours, Fluorescent Colours	2

TABLE – XI (b)**Details On Preference of Colour**

S.No	Selected Colour	Percentage
1	Bright colours	27.2
2	Dull colours	10.5
3	Pastel colours	52.3
4	Fluorescent colours	10

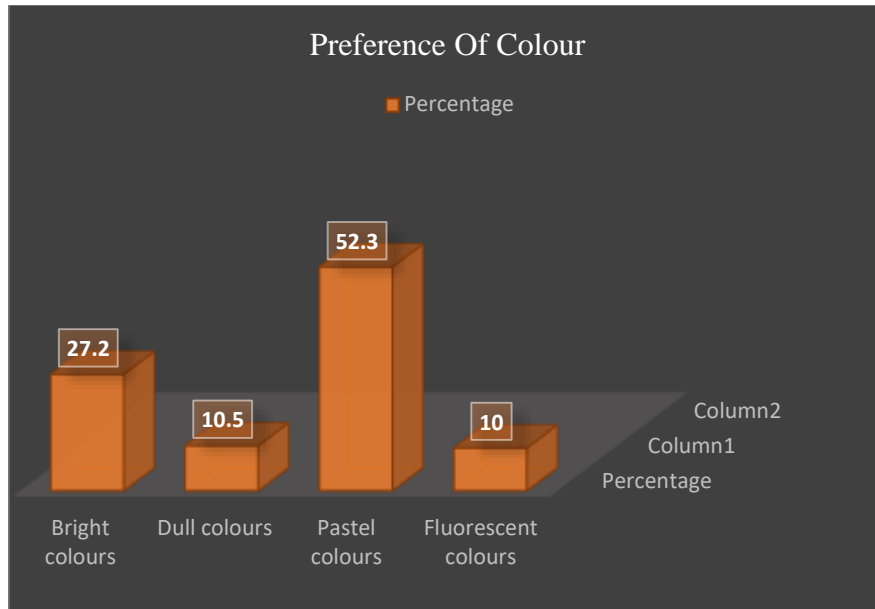


FIGURE - 8

Details on the Selection of Colour for Indo Western Formal Outfit

It is understood from the data, consolidated and predicted in Table - XI and Figure – 8, it is clear that about 52 percent of respondents preferred pastel colours, around 27 percent of respondents preferred bright colours. Whereas, only 10 percent of respondents preferred dull colours and fluorescent colours. Therefore, we can conclude that majority of respondents opted for pastel colours followed by bright colours. Since, this preference may be due to the prevailing fashion trend of consumers liking towards pastel and bright colours.

4.2.7 Budget Details of Formal Outfit

The details regarding the respondent preferences on spending for formal outfit is presented in Table – XII and Figure – 9.

TABLE – XII

Budget Details for Indo Western Formal Outfit

S.No	Budget details (in Rupees)	Frequency	Percentage
1	Less than 1000	46	43.8
2	1000-2500	47	44.8
3	2500-5000	12	11.4
4	More than 5000	0	0

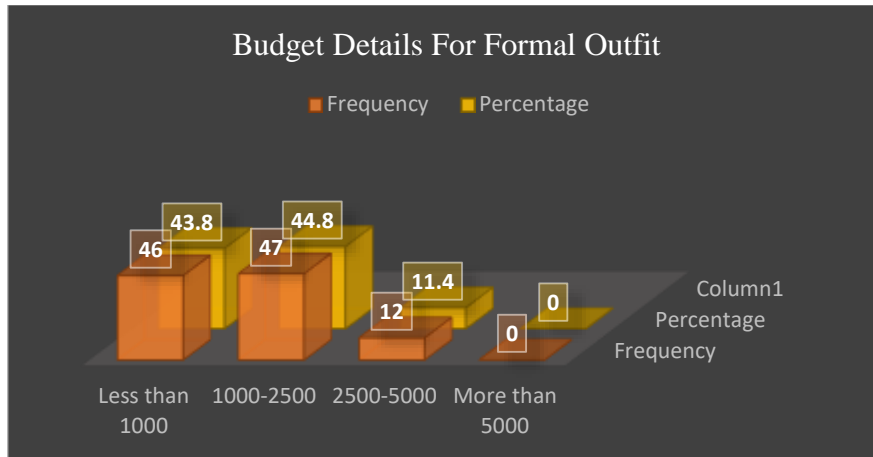


FIGURE – 9

Budget Details for Indo Western Formal Outfit

From the collected information, it is clear that around 45 percent of respondents preferred to spend only Rs.1000 - Rs.2500 as their budget for Indo Western formal outfit. Whereas, 44 percent of respondents preferred to spend only less than Rs.1000, 11 percent of respondents preferred to allocate budget around Rs.2500 – Rs.5000 and nobody preferred budget more than Rs.5000. From the above data we could conclude that majority of respondents preferred budget level of Rs.1000-Rs.2500 for their formal outfit.

4.2.8 Details on Preference of Fastener

The details collected from 105 respondents on preference of fasteners are consolidated and given in Table – XIII and Figure – 10.

TABLE – XIII

Details on Preference of Fastener

S.No	Fastener	Frequency	Percentage
1	Belts	32	31.3
2	Zippers	27	25.7
3	Buttons	31	29.6
4	Rope	15	13.4

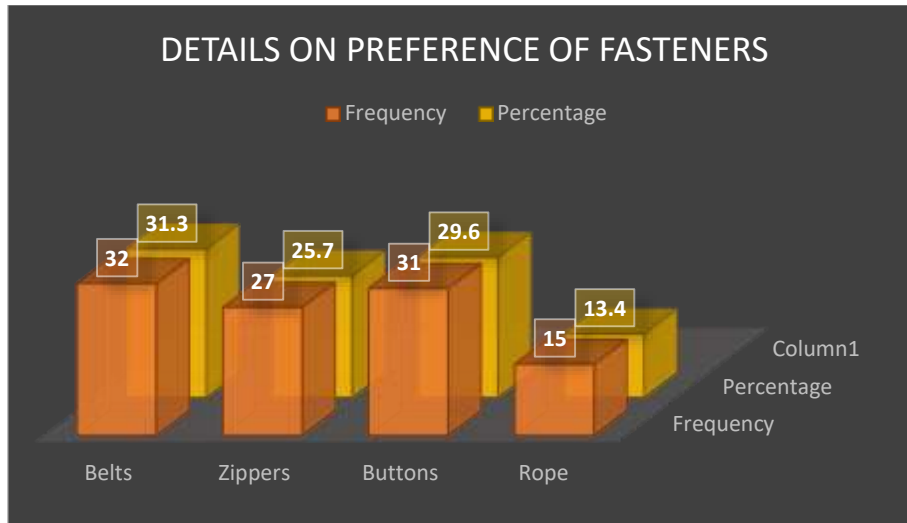


FIGURE – 10

Details on Preference of Fastener

From the collected data presented in Table – XIII and Figure – 10, it was clear that around 31 percent of respondents preferred belts as fasteners, about 30 percent of respondents preferred buttons, 26 percent of respondents preferred zippers as fasteners and approximately 13 percent of respondents preferred rope as their fastener. From the details collected and consolidated, we could conclude that majority of the sample preferred belt as their 1st preference, buttons as their 2nd preference and then zippers. Hence, the investigator used every three high rated fasteners in the garment construction.

4.2.9 Details on their Interest Towards Recreating Indo Western Formal Wear Using Sungudi & Khadi Fabric

The details on the respondent interest towards recreating formal wear with sungudi and khadi fabric was later consolidated and given in Table – XIV and Figure – 11.

TABLE – XIV

Interest on Recreating Indo Western Formals Using Sungudi and Khadi Fabric

S.No	Recreating Indo Western Formals Using Sungudi and Khadi Fabric	Frequency	Percentage
1	Fair	6	5.7
2	Good	22	21
3	Excellent	23	21.9
4	Most Welcoming	54	51.4

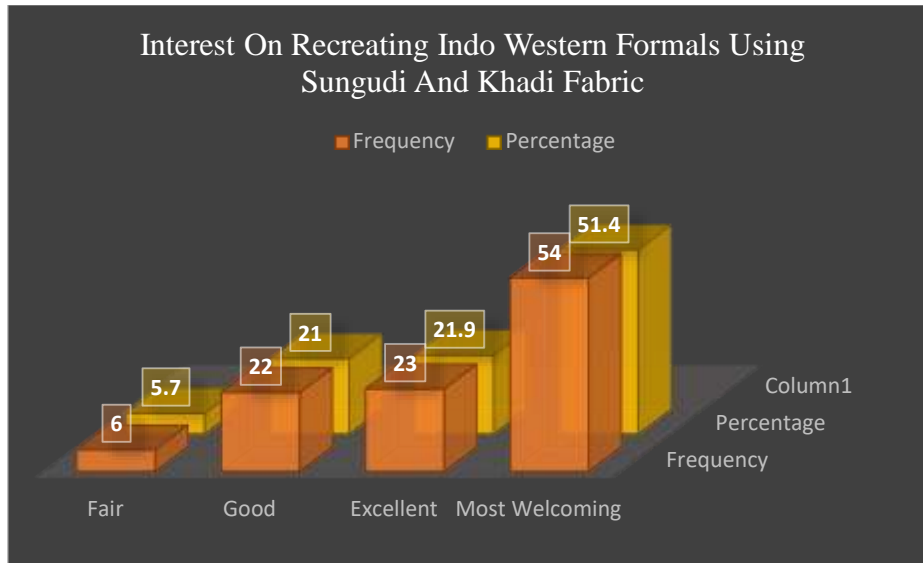


FIGURE – 11

Interest on Recreating Indo Western Formals Using Sungudi and Khadi Fabric

From the collected and consolidated data produced in Table – XIV and Figure – 11, it is clear that 51 percent of respondents welcomed, 22 percent of respondents opined that the idea of combining Sungudi art & Khadi as excellent and 21 percent of respondents expressed as good and only 6 percent stated as fair on recreating formals using Sungudi and Khadi fabric. This shows that the consumers are more towards traditional art and supporting the craftsman livelihood by wearing Handloom and Traditional textiles.

4.3 Evaluation and selection of Manual Garment Designs

The results pertaining to the manual design, evaluated by the selected Textile Expert were evaluated and presented in Table - XV.

TABLE – XV- Evaluation of Manual Garment Designs

S.No.	Designs	Frequency	Percentage %
1.	Design 1		
	Style-1	10	20
	Style-2	11	22
	Style-3	09	18
	Style-4	20	40
2.	Design 2		
	Style-1	19	38
	Style-2	12	24
	Style-3	13	26
	Style-4	06	12
3.	Design 3		
	Style-1	11	22
	Style-2	05	10
	Style-3	29	58
	Style-4	05	10
4.	Design 4		
	Style-1	11	22
	Style-2	24	48
	Style-3	10	20
	Style-4	05	10
5	Design 5		
	Style-1	12	24
	Style-2	06	12
	Style-3	25	50
	Style-4	07	14

From the Table – XV it is evident that, majority of the experts selected Style – 4 (40%) from Design 1, Style – 1 (38%) from Design 2, Style – 3 (58) from Design 3, Style – 2 (48%) from Design 4 and Style – 3 (50) from Design 5. Therefore, from the above data we could conclude that final designs selected by the textile experts were - D1 (S4), D2 (S1), D3 (S3), D4 (S2), D5 (S3).

4.4 Evaluation of the Constructed Muslin Garments

The constructed Muslin Garments were evaluated by the selected 10 textile experts. The experts were asked to visually evaluate the constructed Muslin garments and requested to their satisfaction with each and every measurement by checking their fit, suitability, ease and overall appearance. The visual evaluation of muslin garments is presented in the Table – XVI.

TABLE – XVI

Evaluation of Constructed Muslin Garments

S.No	Measurement Aspects	Good	Satisfactory	Not Satisfactory
A	<u>A-Line dress</u>			
	1. Chest Circumference	100	0	0
	2. Waist Circumference	100	0	0
	3. Hip Circumference	100	0	0
	4. Front neck depth	100	0	0
	5. Back neck depth	90	10	0
	6. Shoulder width	100	0	0
	7. Full length	100	0	0
	<u>Sleeve</u>			
	1. Armscye depth	90	10	0
	2. Upper arm circumference	100	0	0
	3. 3/4 th Sleeve length	100	0	0

B	<u>Kurthi</u>			
	1. Chest circumference	100	0	0
	2. Waist circumference	100	0	0
	3. Hip circumference	100	0	0
	4. Front neck depth	100	0	0
	5. Back neck depth	100	0	0
	6. Shoulder width	90	10	0
	7. Full length	100	0	0
	<u>Straight pant</u>			
	1. Hip circumference	100	0	0
	2. Crotch length	100	0	0
	3. Full length	100	0	0
	4. Ankle circumference	100	0	0
	<u>Sleeve</u>			
	1. Armscye depth	90	10	0
	2. Upper arm circumference	100	0	0
	3. Full Sleeve length	100	0	0
	4. Elbow circumference	100	0	0

From the above Table – XVI it is understood that for A-line dress, all the aspects except Back neck depth and Armscye depth were rated good by cent percent of the experts and 10 percent rated as satisfactory for back neck depth and armscye depth. Similarly, for kurthi and straight pant except for Shoulder width and Armscye depth all the other aspects were rated good by cent percent of subjects which was followed by 10 percent of satisfactory by the subjects for Shoulder width and Armscye depth. Hence it could be concluded that the measurements used for constructing the

selected garments with slight alterations in Back neck depth, Armscye depth and Shoulder width. It is understood that, the cent percent of the subject expert rated the fit of A-Line dress and kurthi & Straight pant as good, however 10% viewed that the back neck depth, armscye depth and shoulder width as satisfactory respectively.

4.5 Evaluation of the Constructed Final Garments

The constructed A-Line dress, Kurthi and Straight Pant, Kaftan Top and Palazzo Pant, Bodycon Dress and Top & Skirt were displayed and requested 25 experts who have thorough knowledge in Textile and Fashion field were asked to evaluate. Aspects such as Garment Design, Ease to Wear, Fitness, Colour Combination, Able to Identify the Art Form, Texture and General Appearance were the criteria's put forth for evaluation.

4.5.1 Evaluation of the Constructed A-Line Dress

The evaluation of constructed A-Line dress was analyzed by selected 25 experts and the data given in the Table – XVII (a).

TABLE – XVII(a)

Evaluation of the Constructed A-Line Dress by Adult Girls

Design Code	A-Line dress		
	GOOD	FAIR	POOR
Design	96	4	-
Ease to Wear	100	-	-
Fitness	100	-	-
Colour Combination	96	4	-
Able to Identify the Art Form	100	-	-
Texture	100	-	-
Overall Appearance	100	-	-

From the above Table – XVII (a) it is clear that 100 percent of experts felt that all the aspects of the constructed A-Line dress are Good except design and colour combination details. However, 4% expressed the design and colour combination details as Fair. This might be due to the individual preference of the experts. Finally, it can be concluded that the experts were extremely satisfied with the ease to wear, Fitness, Ability to identify the art form, texture and overall appearance of the A-Line dress.

4.5.2 Evaluation of the Constructed Kurthi and Straight Pant

The evaluation of constructed Kurthi and Straight Pant was analyzed by selected 25 experts and the data given in the Table – XVII (b).

TABLE XVII – (b)

Evaluation of the constructed Kurthi and Straight Pant by Adult Girls

Design Code	Kurthi and Straight Pant		
	GOOD	FAIR	POOR
Design	96	4	-
Ease to Wear	100	-	-
Fitness	92	8	-
Colour Combination	100	-	-
Able to Identify the Art Form	100	-	-
Texture	100	-	-
Overall Appearance	100	-	-

From the above Table – XVII (b) it is clear that 100 percent of experts felt that the constructed Kurthi and Straight Pant had good ease to wear, colour combination, able to identify the art form, texture and overall appearance respectively. However, 4% and 8% expressed the design and fitness details as fair respectively. Finally, it can be concluded that the experts were

extremely satisfied with the ease to wear, colour combination, Ability to identify the art form, texture and overall appearance of the Kurthi and Straight Pant.

4.5.3 Evaluation of the Constructed Kaftan Top and Palazzo

The evaluation of constructed Kaftan Top and Palazzo was analyzed by selected 25 experts and the data given in the Table – XVII (c).

TABLE XVII – (c)

Evaluation of the constructed Kaftan Top and Palazzo by Adult Girls

Design Code	Kaftan Top and Palazzo		
	GOOD	FAIR	POOR
Design	100	-	-
Ease to Wear	100	-	-
Fitness	100	-	-
Colour Combination	100	-	-
Able to Identify the Art Form	100	-	-
Texture	100	-	-
Overall Appearance	100	-	-

From the above table – XVII (c) it is evident that 100 percent of experts felt that the constructed Kaftan Top and Palazzo are good in all the aspects like Design, ease to wear, fitness, colour combination, expression of art form, texture and overall appearance. Therefore, it can be concluded that the experts were extremely satisfied with all the aspects of the constructed Kaftan Top and Palazzo.

4.5.4 Evaluation of the Constructed Bodycon Dress

The evaluation of constructed Bodycon Dress was analyzed by selected 25 experts and the data given in the Table – XVII (d).

TABLE XVII – (d)

Evaluation of the constructed Bodycon Dress by Adult Girls

Design Code	Bodycon Dress		
	GOOD	FAIR	POOR
Design	100	-	-
Ease to Wear	100	-	-
Fitness	100	-	-
Colour Combination	96	4	-
Able to Identify the Art Form	100	-	-
Texture	96	4	-
Overall Appearance	100	-	-

From the above Table – XVII (d) it is evident that 100 percent of experts felt that the constructed Bodycon dress had good design, ease to wear, fitness, able to identify the art form and overall appearance. However, 4 percent expressed the colour combination and texture aspects as fair respectively. This might be due to the individual’s preference of the experts. Finally, it can be concluded that the experts were extremely satisfied with the Design, ease to wear, fitness, Able to identify the art form, and overall appearance of the Bodycon Dress.

4.5.5 Evaluation of the Constructed Top and Skirt

The evaluation of constructed Top and Skirt was analyzed by selected 25 experts and the data given in the Table – XVII (e).

TABLE XVII – (e)

Evaluation of the constructed Top and Skirt by Adult Girls

Design Code	Top and Skirt		
	GOOD	FAIR	POOR
Design	100	-	-
Ease to Wear	92	8	-
Fitness	96	4	-
Colour Combination	100	-	-
Able to Identify the Art Form	100	-	-
Texture	100	-	-
Overall Appearance	100	-	-

From the above Table – XVII (e) it is understood that 100 percent of experts felt that the constructed Top and Skirt had good design, colour combination, able to identify the art form, texture and overall appearance. However, 4% and 8% expressed the ease to wear and fitness aspects as fair respectively. This might be due to the individual preference of the experts. Finally, it can be concluded that the experts were extremely satisfied with the Design, colour combination, Able to identify the art form, texture and overall appearance of the Top and Skirt.

4.6 Cost Estimation

The cost estimation is presented in Table – XVIII.

TABLE – XVIII
COST ESTIMATION

S.No	Garment Code	Particulars	Cost	Total Cost
1	CALP4	Material cost Trimmings and Decorations Stitching Charge Accessory cost	850 20 500 50	1420
2	CKPP1	Material cost Trimmings and Decorations Stitching Charge Accessory cost	800 50 450 40	1340
3	CKPP3	Material cost Trimmings and Decorations Stitching Charge Accessory cost	960 20 400 60	1440
4	CBCP2	Material cost Trimmings and Decorations Stitching Charge Accessory cost	570 50 450 30	1100
5	CTSP3	Material cost Trimmings and Decorations Stitching Charge Accessory cost	1200 60 550 50	1860

From the above Table – XVIII, it is clear that the cost of the garments CALP4, CKPP1, CKPP3, CBCP2, CTSP3 are calculated to be Rs.1420, Rs.1340, Rs.1440, Rs.1100 and Rs.1860 respectively.

Hence it could be concluded that the cost of constructed garments are much economical of which it was least in the garment CBCP2 of Rs.1100. The garments can also be preferred by middle income groups too.

5. SUMMARY AND CONCLUSION

Clothing satisfies social and emotional needs but it is worn on body and it becomes part of our physical being. Clothing reflect standards of modesty, status, gender, religion and expression of personal task. The designing of fashion product process involves two key process – one is product adaptation and other is creation and the most common is the combination of these two. In recent days, there is an increasing curiosity in revolutionary conceptual design at fashion industry. Youngsters clothing satisfaction has a significant effect on their moods and actions and social approval is of a great concern to them. A well-designed garment has beauty and appropriateness which makes it right for the wearer as well as the occasion.

Similarly, there are few art forms that need a push to sustain in this evolving digital life and one such art is “Sungudi”. Sungudi is not only considered as a fabric, it is observed that it offers a livelihood for thousands of families. By 80’ the original sungudi had started disappearing as the manufacturers switched over to power looms, chemical dyes and block prints. Bringing life to the Sungudi sector with the help of new trends will definitely pave the way for their betterment. One such great path to do so will be incorporating Sungudi art on the Indo Western formal wear. In India, handloom weaving has a long tradition of excellence and craftsmanship. The skilled artists and craftsman of handloom weavers, even though are facing a gradual decline over the years economically, handloom process continues and remains as a significant component of Indian textile industry. The tradition of weaving by hand is a part of the country’s inspirational culture. It has a high range of possibilities and variety to style unique and fulfil the chain break of today’s fashion trends. Sungudi art forms can be merged with the Indo western culture and when we create them with handloom fabric, people start to adopt them and the handloom sector will flourish. Simultaneously the urge for popularizing sungudi art will also improve. Hence an attempt has been made to carry out a study on Design and Development of Indo Western Formals for Women using Sungudi and Khadi Fabric with the specific objectives:

- To select sungudi and khadi material for women’s formal wear
- To create suitable outfit for women
- To select garment in different variations
- To sew garments and matching accessories
- To evaluate and estimate the cost

For this, the investigator prepared an online survey form to collect information about the interest and awareness among young girls about handloom, Sungudi art and Indo western Formal garments. The questionnaire carries the information of adult girls knowledge on Madurai sungudi art, their likings about incorporating sungudi and khadi in Indo Western Formals, preferences of western outfit, preferences of colour, preference of silhouette, preference of motif and fabric, budget details and value addition. The questionnaire was distributed through online to over 105 adult girls who were selected randomly as samples to collect the information. The required data are collected and recorded personally.

To construct the garments with standardized body measurements, the investigator selected 50 young women between the age group 20-25 years from Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore for recording the body measurements. Body measurements were taken as per the procedures described by the textile and fashion professionals. Each body measurement thus recorded was grouped into specific class intervals using the formula;

$$Mo = L + \frac{\Delta_1}{\Delta_1 + \Delta_2} \times i$$

The modal value for each measurement was obtained as the standard value, which was used for designing and drafting the basic patterns for the garments.

The investigator has chosen A-Line dress, Kurthi and Straight pant, Kaftan top and Palazzo, Bodycon dress and Skirt and Top since these styles are mostly preferred as Indo Western wear by young adults. The investigator had designed 25 basic flat styles by manual sketching, from which 5 garment styles were selected by the textile experts. Then each style was manipulated with fabric rendering into 4 styles manually. A total of 20 styles were created and they were evaluated by 50 textile experts from Avinashilingam Institute for home science and higher education for women, Coimbatore. Finally, five highly rated garments with perfectly matching colour combination of sungudi and khadi fabric such as A-Line dress, Kurthi and Straight pant, Kaftan top and Palazzo, Bodycon dress and Skirt and Top were selected for this study. For the colour, most of them preferred pastel shades and bright shades, and hence pastel and bright colours were selected for constructing these garments.

The investigator constructed the muslin pattern as per the basic pattern drafting given for the garments. The constructed garments were evaluated for fitting by trying them on dress form. The selected dress form was chosen based on the fact that the body measurements of dress form

were nearer to the standardized body measurements. Details such as fit, balance, ease, set and grain were checked and noted down carefully.

The necessary alterations were incorporated, and the investigator had constructed the selected five sets of garments. 25 judges comprising of staff and students from the Textiles and Clothing Department from Avinashilingam Institute for home science and higher education for women, Coimbatore were asked to evaluate the constructed garment designs using a proforma. The data thus collected were consolidated and analyzed systematically.

FINDINGS OF THE STUDY

Individual Survey

- 68 percent of the adult girls were aware of Sungudi art forms and 61 percent of them encouraged wearing Indo Western Formals styled out of Sungudi fabric.
- 77 percent of the adult girls encouraged incorporating Sungudi in Indo Western Formal outfit and 64 percent of the respondents using handloom garments occasionally.
- With regard to the selection of silhouette 40 percent preferred A-Line and 36 percent preferred hourglass silhouette. In the selection of western outfit, 40 percent of respondents selected tops and palazzo, where 32 percent opted for A-Line dress.
- Regarding the motif selection, 61 percent of respondents preferred both traditional and modern motifs. While, for selection of fabric type 55 percent opted for both handloom and power loom fabric.
- Regarding the colour, 52 percent of young women preferred pastel shades for Indo Western Formal attire.
- From the survey it was evident that 45 percent of samples can afford Rs.1000 - Rs.2500 for their Indo Western Formal wear.
- With regards to the fasteners in their Indo Western Formal wear 31 percent preferred belts followed by, 30 percent of them opted for buttons.
- 51 percent of respondents most welcomed the idea of combining sungudi and khadi, while 22 percent opined excellent.
- Evaluating the fit of muslin garments, all the measurements of the constructed garment were rated 100 percent good, except back neck depth, armscye depth and shoulder width of A-line dress and kurthi and straight pant which was rated 90 percent by the respondents.

- Almost all the aspects of the sewn garments were rated as good and none of the experts rated bad/not satisfied with any of the aspects.
- The cost estimated for garments CALP4, CKPP1, CKPP3, CBCP2, CTSP3 are Rs.1420, Rs.1340, Rs.1440, Rs.1100 and Rs.1860 respectively.

CONCLUSION

In this study with the collected and analyzed information the conceptual fashion design process was carried out. The contributions of this study raised from the findings were 1) determining the survey questions 2) determining and selecting the manual designs 3) collecting the data 4) analyzing the data 5) interpreting the data 6) legitimating the data and 7) drawing conclusions. The world of fashion and textile design have become close and increasingly reliant to one another. Today's fabric, because of the way they are produced and also the application they were designed for, which allow designers greater freedom to explore issues other than simply the conventions of silhouette and style. The future of fashion designers lies to a greater extent in the selection of fabrics. Sungudi art and culture should be given a fresh focus and respect in the larger scheme of cultural development. For long-term upliftment, the best qualities of both tradition and modernity should be combined. It is high time to create garments with those heritages of India in order to preserve its uniqueness. Today's consumers are more towards traditional art and also supporting craftsman livelihood by using handloom and traditional textiles. With this I conclude that a step to upliftment of Sungudi art and Khadi is made with infusing them towards modern culture without affecting its tradition and these garments are affordable by middle income groups too. This mixture of Sungudi art and Khadi in Indo Western Formals has got a big market with youngsters liking towards it.

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APPENDIX - A

STUDY TO COLLECT INFORMATION ABOUT AWARENESS ON RECREATING INDOWESTERN FORMALS USING SUNGUDI AND KHADI FABRIC

1. Name :
2. Age : Below 20 20-25 years 25-30 years 30-40 years Other
3. Designation: Working Student
4. Location : Urban Rural
5. Are you passionate about dressing yourself?
 Yes No
6. What type of western outfit do you prefer to wear?
 A-Line dress Solid shirt and trousers
 Formal blouses Tops and palazzo
 Blazers
7. Do you know about Madurai sungudi art?
 Yes No Maybe
8. Have you ever used garments made out of Sungudi fabric?
 Yes No Maybe
9. Do you encourage incorporating Sungudi fabric in Indo Western Formal wear?
 Yes No Maybe
10. What should be the major criteria for formal wear?
 Comfort Style Uniqueness Other
11. Do you youngsters prefer wearing Indo Western Formals made out of Sungudi fabric?
 Yes No Maybe
12. What colour do you prefer for Indo Western Formal wear?
 Bright colours Dull colours
 Pastel colours Fluorescent colours
13. Which type of Dyeing process on sungudi fabric would you prefer?
 Natural dyeing Synthetic dyeing
14. Which type of silhouette do you prefer for Indo Western Formal wear?
 A-Line silhouette Shirt silhouette
 Peplum silhouette Hourglass silhouette

15. How often do you purchase Indo Western Formal wear?
- Once in a month Once in 3 months
- Once in 6 months
16. What would be your budget details for Indo Western Formal wear?
- Less than Rs.1000 Rs.1000 – Rs.2500
- Rs.2500 – Rs.5000 More than Rs.5000
17. Which sungudi fabric motif do you prefer?
- Traditional dots Modern motifs
- Both
18. Which type of sungudi fabric would you prefer?
- Handloom fabric Machine made fabric
- Maybe both
19. How often do you use Handloom garments?
- Always Often
- Occasionally Never used
20. Would you youngsters prefer Sungudi garments for college wear?
- Yes No Maybe
21. What are the Indo Western formal wear you prefer the most?
- A-Line dress Maxi dress
- Fit and flare dress Top and midi
- Kurthi and Pants
22. what value addition would you like to have in your garment?
-
23. What are the special features you prefer for Indo Western Formal wear?
- Belts Zippers
- Buttons Rope
24. What do you think about recreating Indo Western Formal wear using Sungudi and Khadi fabric?
- Most welcoming Excellent
- Good Fair

APPENDIX - B

BODY MEASUREMENTS RECORDED FOR GIRLS AT THE AGE GROUP 20-25 YEARS

S.No	Chest	Waist	Hip	Neck circumference	Shoulder	Front Waist length	Back waist length	Shoulder to bust	Arm scye	Upper arm circumference	Elbow circumference	Wrist	Full sleeve length	Waist to hip	Waist to ankle	Ankle circumference	Shoulder to hip	Shoulder to knee	Shoulder to ankle	Crotch length
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1	81.28	66.04	83.82	35.56	35.56	33.02	35.56	22.86	35.56	27.94	30.48	17.78	58.42	22.86	104.14	25.4	53.34	88.9	134.62	25.4
2	96.52	81.28	109.22	35.56	38.1	35.56	38.1	25.4	48.26	38.1	30.48	17.78	60.96	25.4	96.52	25.4	55.88	91.44	144.78	22.86
3	91.44	73.66	96.52	33.02	35.56	33.02	35.56	22.86	40.64	33.02	25.4	15.24	58.42	22.86	96.52	25.4	50.8	88.9	137.16	22.86
4	66.04	55.88	78.74	33.02	33.02	33.02	35.56	22.86	33.02	22.86	22.86	15.24	55.88	20.32	93.98	20.32	48.26	86.36	129.54	22.86
5	101.6	88.9	104.14	38.1	38.1	35.56	38.1	25.4	43.18	25.4	30.48	17.78	58.42	25.4	101.6	25.4	50.8	91.44	147.32	22.86
6	91.44	71.12	99.06	35.56	35.56	33.02	35.56	22.86	35.56	25.4	27.94	17.78	58.42	22.86	104.14	25.4	53.34	88.9	144.78	22.86
7	83.82	58.42	93.98	35.56	35.56	33.02	35.56	22.86	35.56	22.86	33.02	17.78	58.42	22.86	104.14	25.4	53.34	91.44	134.62	22.86
8	88.9	73.66	88.9	38.1	35.56	33.02	35.56	22.86	33.02	30.48	25.4	15.24	58.42	22.86	88.9	22.86	58.42	91.44	134.62	22.86
9	81.28	58.42	76.2	35.56	35.56	33.02	35.56	22.86	38.1	30.48	25.4	15.24	55.88	22.86	91.44	25.4	55.88	88.9	134.62	22.86
10	88.9	76.2	88.9	38.1	38.1	33.02	35.56	22.86	35.56	33.02	25.4	15.24	58.42	22.86	88.9	22.86	58.42	91.44	134.62	22.86
11	88.9	73.66	91.44	35.56	38.1	33.02	35.56	22.86	45.72	30.48	27.94	17.78	58.42	22.86	93.98	25.4	53.34	93.98	147.32	25.4
12	88.9	76.2	93.98	38.1	38.1	33.02	35.56	22.86	33.02	30.48	25.4	15.24	58.42	22.86	88.9	22.86	60.96	91.44	137.16	25.4
13	88.9	76.2	91.44	38.1	38.1	33.02	35.56	22.86	33.02	30.48	25.4	15.24	58.42	22.86	88.9	22.86	58.42	91.44	134.62	25.4

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
14	88.9	76.2	88.9	33.02	38.1	33.02	35.56	22.86	43.18	25.4	27.94	20.32	55.88	22.86	96.52	25.4	50.8	91.44	144.78	25.4
15	91.44	66.04	93.98	38.1	35.56	33.02	38.1	22.86	43.18	30.48	30.48	20.32	58.42	25.4	96.52	25.4	55.88	91.44	144.78	25.4
16	76.2	58.42	88.9	35.56	35.56	33.02	35.56	22.86	35.56	33.02	27.94	17.78	58.42	22.86	96.52	25.4	50.8	93.98	147.32	22.86
17	91.44	76.2	91.44	38.1	38.1	33.02	35.56	22.86	35.56	30.48	25.4	15.24	55.88	22.86	88.9	22.86	58.42	91.44	134.62	25.4
18	76.2	68.58	81.28	33.02	35.56	33.02	35.56	22.86	33.02	30.48	27.94	20.32	55.88	20.32	91.44	22.86	50.8	86.36	129.54	22.86
19	81.28	71.12	86.36	33.02	33.02	33.02	35.56	22.86	38.1	38.1	30.48	17.78	58.42	22.86	96.52	25.4	53.34	91.44	144.78	22.86
20	86.36	68.58	99.06	35.56	38.1	33.02	35.56	22.86	38.1	40.64	30.48	17.78	58.42	22.86	101.6	25.4	55.88	93.98	147.32	22.86
21	88.9	76.2	91.44	38.1	38.1	33.02	35.56	22.86	33.02	30.48	25.4	15.24	58.42	22.86	88.9	22.86	58.42	91.44	134.62	22.86
22	96.52	81.28	109.22	35.56	38.1	35.56	38.1	25.4	48.26	38.1	30.48	17.78	60.96	25.4	96.52	25.4	55.88	91.44	144.78	25.4
23	91.44	73.66	96.52	33.02	35.56	33.02	35.56	22.86	40.64	33.02	25.4	15.24	58.42	22.86	96.52	25.4	50.8	88.9	137.16	22.86
24	66.04	55.88	78.74	33.02	33.02	33.02	35.56	22.86	33.02	22.86	22.86	15.24	55.88	20.32	93.98	20.32	48.26	86.36	129.54	22.86
25	101.6	88.9	104.14	38.1	38.1	35.56	38.1	25.4	43.18	25.4	30.48	17.78	58.42	25.4	101.6	25.4	50.8	91.44	147.32	25.4
26	91.44	71.12	99.06	35.56	35.56	33.02	35.56	22.86	35.56	25.4	27.94	17.78	58.42	22.86	104.14	25.4	53.34	88.9	144.78	22.86
27	83.82	58.42	93.98	35.56	35.56	33.02	35.56	22.86	35.56	22.86	33.02	17.78	58.42	22.86	104.14	25.4	53.34	91.44	134.62	22.86
28	76.2	71.12	81.28	35.56	35.56	33.02	35.56	22.86	38.1	25.4	25.4	15.24	58.42	20.32	109.22	22.86	50.8	88.9	144.78	22.86
29	81.28	58.42	76.2	35.56	35.56	33.02	35.56	22.86	38.1	30.48	25.4	15.24	55.88	22.86	91.44	25.4	55.88	88.9	134.62	22.86
30	88.9	78.74	91.44	38.1	38.1	33.02	35.56	22.86	33.02	30.48	27.94	15.24	58.42	22.86	88.9	22.86	58.42	88.9	134.62	22.86
31	83.82	58.42	91.44	35.56	38.1	33.02	35.56	22.86	45.72	30.48	27.94	17.78	58.42	22.86	93.98	25.4	53.34	93.98	147.32	22.86
32	96.52	73.66	104.14	38.1	35.56	35.56	38.1	25.4	40.64	22.86	30.48	17.78	58.42	25.4	91.44	25.4	53.34	93.98	147.32	22.86

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
33	76.2	58.42	88.9	35.56	35.56	33.02	35.56	22.86	35.56	33.02	27.94	17.78	58.42	22.86	96.52	25.4	50.8	93.98	147.32	22.86
34	81.28	73.66	91.44	35.56	35.56	33.02	35.56	22.86	33.02	38.1	27.94	17.78	58.42	22.86	99.06	25.4	53.34	91.44	142.24	22.86
35	76.2	68.58	81.28	33.02	35.56	33.02	35.56	22.86	33.02	30.48	27.94	20.32	55.88	20.32	91.44	22.86	50.8	86.36	129.54	22.86
36	81.28	71.12	86.36	33.02	33.02	33.02	35.56	22.86	38.1	38.1	30.48	17.78	58.42	22.86	96.52	25.4	53.34	91.44	144.78	22.86
37	86.36	68.58	99.06	35.56	38.1	33.02	35.56	22.86	38.1	40.64	30.48	17.78	58.42	22.86	101.6	25.4	55.88	93.98	147.32	22.86
38	88.9	78.74	91.44	38.1	38.1	33.02	35.56	22.86	33.02	30.48	25.4	15.24	58.42	22.86	88.9	22.86	58.42	91.44	134.62	25.4
39	81.28	73.66	91.44	35.56	35.56	33.02	35.56	22.86	33.02	38.1	27.94	17.78	58.42	22.86	99.06	25.4	53.34	91.44	142.24	22.86
40	76.2	68.58	81.28	33.02	35.56	33.02	35.56	22.86	33.02	30.48	27.94	20.32	55.88	20.32	91.44	22.86	50.8	86.36	129.54	22.86
41	81.28	71.12	86.36	33.02	33.02	33.02	35.56	22.86	38.1	38.1	30.48	17.78	58.42	22.86	96.52	25.4	53.34	91.44	144.78	22.86
42	86.36	68.58	99.06	35.56	38.1	33.02	35.56	22.86	38.1	40.64	30.48	17.78	58.42	22.86	101.6	25.4	55.88	93.98	147.32	22.86
43	76.2	58.42	76.2	33.02	38.1	33.02	35.56	22.86	43.18	25.4	27.94	20.32	55.88	22.86	96.52	25.4	50.8	91.44	144.78	22.86
44	96.52	81.28	109.22	35.56	38.1	35.56	38.1	25.4	48.26	38.1	30.48	17.78	60.96	25.4	96.52	25.4	55.88	91.44	144.78	22.86
45	91.44	73.66	96.52	33.02	35.56	33.02	35.56	22.86	40.64	33.02	25.4	15.24	58.42	22.86	96.52	25.4	50.8	88.9	137.16	22.86
46	66.04	55.88	78.74	33.02	33.02	33.02	35.56	22.86	33.02	22.86	22.86	15.24	55.88	20.32	93.98	20.32	48.26	86.36	129.54	22.86
47	101.6	88.9	104.14	38.1	38.1	35.56	38.1	25.4	43.18	25.4	30.48	17.78	58.42	25.4	101.6	25.4	50.8	91.44	139.7	25.4
48	91.44	71.12	99.06	35.56	35.56	33.02	35.56	22.86	35.56	25.4	27.94	17.78	58.42	22.86	104.14	25.4	53.34	88.9	144.78	22.86
49	83.82	58.42	93.98	35.56	35.56	33.02	35.56	22.86	35.56	22.86	25.4	17.78	58.42	22.86	104.14	25.4	53.34	91.44	134.62	22.86
50	88.9	76.2	91.44	38.1	38.1	33.02	35.56	22.86	33.02	30.48	25.4	15.24	58.42	22.86	88.9	22.86	58.42	91.44	134.62	25.4

APPENDIX - C

SAMPLE CALCULATION OF THE MODAL VALUE

Body Measurements	Range (cm)	Number of Adult Girls
Chest Circumference	60-65	3
	65-70	0
	70-75	0
	75-80	7
	80-85	12
	85-90	13
	90-95	8
	95-100	4
	100-105	3

$$M_o = L + \frac{\Delta_1}{\Delta_1 + \Delta_2} X_i$$

where 'L' is the lower limit of the modal class,

' Δ_1 ' is the difference between the frequency of the modal class and pre-modal class,

' Δ_2 ' is the difference between the frequency of the modal class and the post-modal class,

'i' is the class interval of the modal class.

$$M_o = 85 + \frac{(13-12)}{(13-12) + (13-8)} \times 5$$

$$M_o = 85 + \frac{1}{6} \times 5$$

$$M_o = 85.83 \text{ cm}$$

The modal value = 85.83 cm

APPENDIX – D (a)
MATERIAL USED FOR MUSLIN PATTERN



Type - 100 % Preshrunk cotton
Composition - 100 %
Weave - Plain
Type - Long cloth

APPENDIX – D (b)
SUNGUDI AND KHADI FABRIC SWATCHES USED FOR GARMENTS



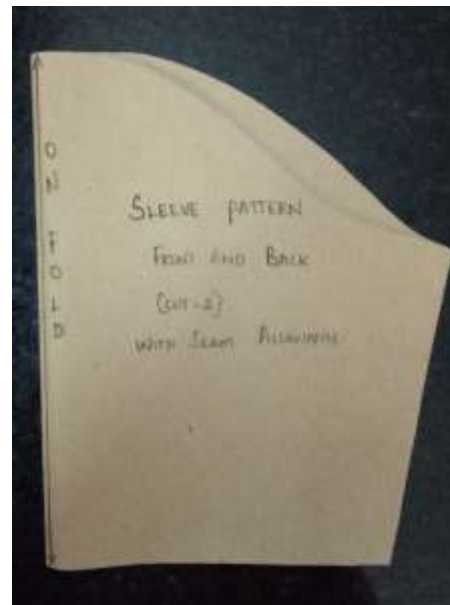
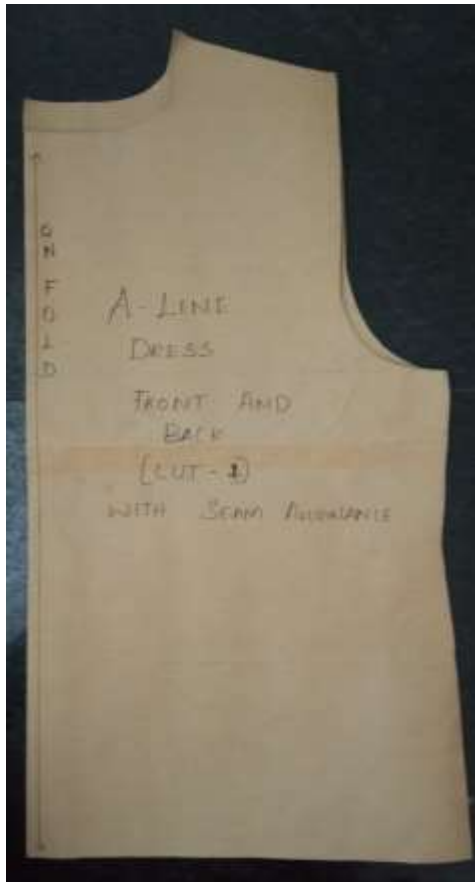


APPENDIX - E

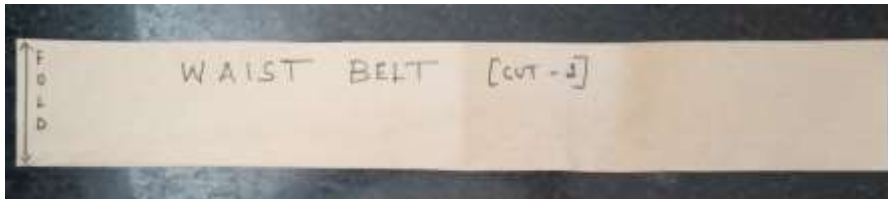
EVALUATION OF THE MUSLIN GARMENTS

S.No	Aspects	Good	Satisfactory	Not Satisfactory
A	<p>A-Line dress</p> <ol style="list-style-type: none"> 1. Chest Circumference 2. Waist Circumference 3. Hip Circumference 4. Front neck depth 5. Back neck depth 6. Shoulder width 7. Full length <p>Sleeve</p> <ol style="list-style-type: none"> 1. Armscye depth 2. Upper arm circumference 3. 3/4th Sleeve length 			
B	<p>Kurthi</p> <ol style="list-style-type: none"> 1. Chest circumference 2. Waist circumference 3. Hip circumference 4. Front neck depth 5. Back neck depth 6. Shoulder width 7. Full length <p>Straight pant</p> <ol style="list-style-type: none"> 1. Hip circumference 2. Crotch length 3. Full length 4. Ankle circumference <p>Sleeve</p> <ol style="list-style-type: none"> 1. Armscye depth 2. Upper arm circumference 3. Full Sleeve length 4. Elbow circumference 			

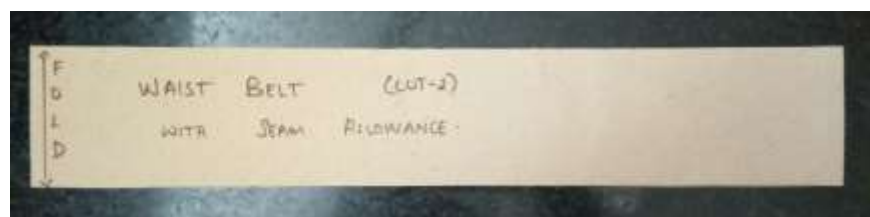
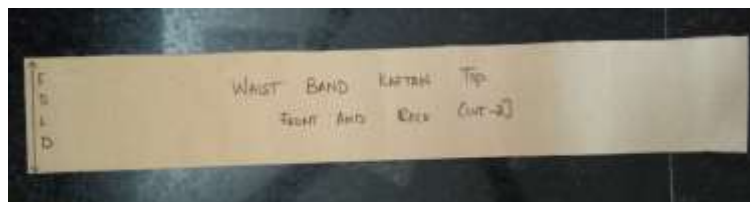
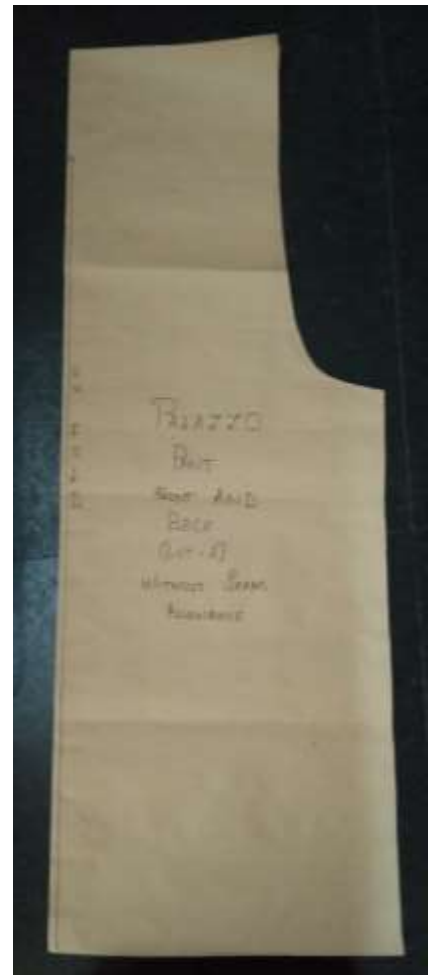
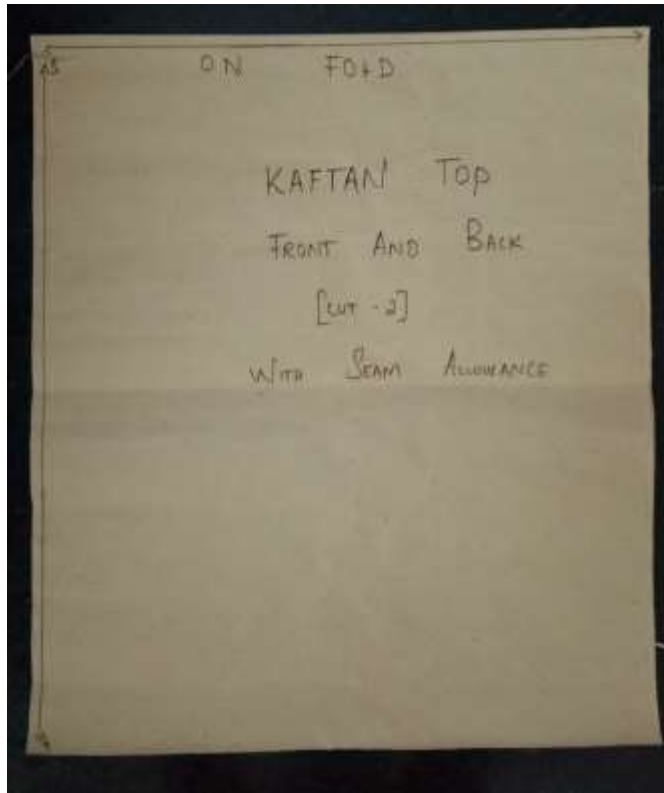
PATTERN FOR A-LINE GARMENT



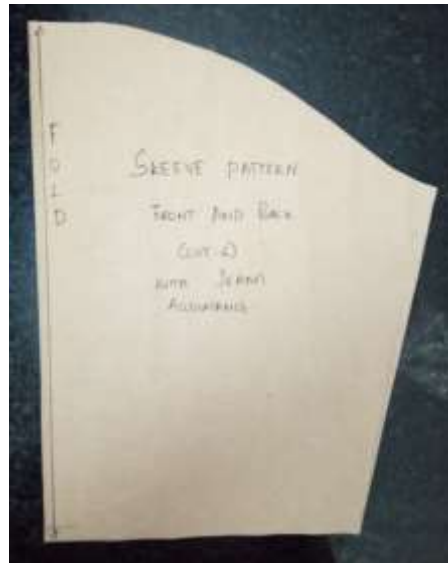
PATTERN FOR KURTHI AND STRAIGHT PANT



KAFTAN TOP AND PALAZZO PANT



BODYCON DRESS



TOP AND SKIRT

