

DESIGNING ADJUSTABLE MATERNITY APPAREL FOR WORKING WOMEN.

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UNIVERSITY.**

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DECLARATION

I Nangyeshe Brenda hereby declare that the work presented in this study is my own original work and has never been submitted in any university or tertiary institution for an award.

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DATE: 24/04/2018.....

RESEARCHER: NANGYESHE BRENDA.....

APPROVAL

This is to certify that NANGYESHE BRENDA carried out the study and the work in this guide book under our supervision and is now ready for submission with our due approval.

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DEDICATION

I dedicate this study, to my family and to a dear friend and colleague Elijah Mongoyi.

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ABSTRACT

The working pregnant women's apparel has been neglected a lot here in Uganda and therefore limiting them to few fashionable clothing choices that are not work appropriate for them. The aim of the study "*Designing adjustable maternity apparels for working pregnant women*" was to come up with designs for working pregnant women using various designs and fabric decoration methods to facilitate their use throughout the pregnancy and enhance the apparel. The objective of the study was to analyze the different types of maternity apparels worn by working class women, to find out the perceptions pregnant women had towards maternity apparels and finally to design and produce adjustable maternity apparels for the working pregnant women. Interviews, questionnaires and observation techniques were used to get responses from the subjects. The data was presented in tables, pie charts and histogram. The findings revealed that shift dress styles, layering and empire waist dress styles were the most favored by pregnant women because of their easy fitting style which provides room for the growing belly. The study also revealed that the perceptions pregnant women had towards maternity clothing was mostly because they were expensive and could only be used once. With the data collected, the researcher was able to design and produce maternity apparels for working pregnant women.

CHAPTER ONE: INTRODUCTION

1.1 Background

Women and fashion are synonymous. (Daiane Scaraboto and Eileen Fischer, 2012). Women like to dress fashionably when they are going to work, church or to attend social events and it's also dignifying for a woman to appear presentable (Annamma, Sherry, Venkatesh, Wang and Chan, 2012). Humans have used apparel for reasons of modesty, protection from the elements of weather, adornment, and status from the earliest recorded history (Horn 1986). Women today wear clothing for the purpose of expression of self, one's personality, culture, social status and mood.

For the pregnant women, the fashionable and reusable clothing that looks professional in the office are not in abundance and much of the maternity wear has a tendency to be mind numbingly generic per se, but choice is even more limited when it comes to work wear (Flemming 2010). The apparels that are available on the market are mass produced using standard sizes, stocked in retail shops and are intended to be worn immediately by the purchaser and they may not go through the trimester or be used after delivery (Rice and Brown 2001). Unlike custom made apparel which has been produced for a specific customer, ready to wear apparels are made to fit a target customer whose precise body size and measurements are not known by the manufacturers (Chum- Yoon and Jasper 1993). In order to produce apparels for a target customer, it becomes necessary to standardize according to the body types based on statistical averages derived from anthropometric survey (Moor, Mullet and Young 2009).

However, these mass produced apparels have been found wanting because they do not address the constant changes that the pregnant women's bodies undergo. Many women's body shapes change when they get pregnant. This is because of the physiological changes which occur to them during this phase of growth (Chum- Yoon and Jasper 1993). During pregnancy the body changes day by day so it's a real challenge to find clothing that looks good and will still do the job for the next months. (Lindsay Hutton 2016). Yet most working women work till they give birth and most maternity cloth designers create clothes that don't really cater to the needs a working pregnant woman. For example a recent post in the wall street journal on Spain's

pregnant Defense Minister, Carme Chacon, generated criticism of the overly girly design of many maternity clothes (Bertsche,2015). Some of these designs are not work appropriate like the bow placed at the belly and starchy fabrics that attracts attention towards the growing belly (Meghan Blalock, 2014). As times are quickly changing and the economy evolving, women may need to re-think the way they dress for work when they are pregnant. Employers are looking to trim staff and increase efficiencies, and these decisions are made behind closed doors. In these times, the less you make of your pregnancy the better. One can do this by avoiding maternity clothing that screams “I am pregnant.” (Cindy Cutler and Maureen Costello, 2016)

The maternity clothes that may pass for the work environment are expensive or of shabby quality. Pregnant women cannot wear the clothes they used during subsequent pregnancies. They are piled, faded and look like they were washed with an iron brush, and are designed to look nice for about two months and then fall apart (Christina, 2010).

Many women are happy working up until their due date but some experts say you shouldn't work beyond week 32 (Bona 2007). Just like most of the other working women in the world, women in Uganda also continue to work until their due date or they feel they are unable to go on with the work load. Therefore, this shows a need for fashionable, affordable, reusable and professional clothing for working pregnant women. In addition, these women have been found to display a strong interest in fashion despite the fact that they are pregnant because at this age they are at the peak of their career (Ogunnaike. L, 2009). This cohort of women have reported difficulty in finding proper fitting apparel and have indicated that they would increase their purchase if appropriately sized apparels were available for them (Brook, Ulrich and Connell 2010). A combination of screen printing and embroidery hasn't been used by the textile artists to create fabrics for formal wear. Embroidery is only used as a decorative finish on complete garments and not as a technique to decorate a fabric. This study intends to create adjustable maternity designs the working pregnant woman can wear before, during and after the pregnancy using fabrics decorated with a combination of embroidery and screen printing.

1.2 Problem Statement

Although pregnant women continue working throughout the pregnancy, they have to be comfortable and fashionable at work hence the need for appropriate maternity clothing that they can wear during and even after the pregnancy. Quite often women will keep on purchasing different attires or maternity wear as the pregnancy advances. This becomes expensive in the long run because for some of these clothes especially maternity clothes may not be used after the pregnancy. There seems to be no adjustable designs that enable one to use the same dress at different stages of the pregnancy available on the market in Kampala. The study therefore intends to design adjustable maternity apparels for pregnant women that can be worn at different stages of the pregnancy and even after the pregnancy.

1.3 Purpose of the study

The purpose of the study was to develop designs for clothing that are comfortable, affordable, fashion forward and work appropriate for the working pregnant woman working in the corporate sector in Kampala.

1.4 Objective of the study

1. To analyze the different types of maternity apparels worn by working class women.
2. To find out the perceptions pregnant women have towards maternity apparels.
3. To design and produce adjustable maternity apparels for working pregnant women.

1.5 Research questions

1. What kind of maternity apparels are worn by working class women?
2. What are the perceptions pregnant women have towards maternity apparels?
3. Can adjustable maternity clothes be designed and produced for pregnant women?

1.7 Geographical Scope

The studio experiment work was done at Kara Designs, a textile and fashion workshop in Bugolobi. The workshop was selected because it was easy to access the target population from there. The study also utilized TEXFAD Ltd given that the researcher didn't have facilities at hand for screen printing.

The researcher looked at the working pregnant women and the trends in maternity apparels used by women in Banks in Kampala. This was adopted because Kampala was where most of the business and company offices are located. The shops were also easily accessible to the researcher so it was easy to find out the types of apparel exist on the market.

1.7.1 Content Scope

The content of the study was centered around the objectives of the study. This involved analyzing the different types of maternity worn by working pregnant women, finding out the perceptions pregnant women had towards maternity apparels and designing adjustable maternity apparels for working pregnant women

1.8 Significance of the Study

The study will benefit the following people in the ways mentioned below:

The study will be useful for future referencing as there is little research that has been in line with maternity apparel in Africa more so in Uganda. The study will provide more knowledge in regards to designing adjustable maternity apparel for working pregnant women.

The study would provide knowledge for fashion designers and manufacturers of maternity apparel in a way that they will be able to design and produce appropriate clothing for the working pregnant women since the information on the apparel needs of the pregnant women has been availed in the study. The fashion designers will benefit in a way that they will be inspired to think outside the box and create designs that are versatile in purpose also to go on to create and produce fabric designs for their fashion creations.

The study will create a starting point for other areas of research that will in turn benefit pregnant women in a way that they will not have to incur extra expenses of buying additional maternity clothes because the apparels adjust as their bodies keep growing and changing since the apparels are adjustable.

1.9 Definition of Terms

Adjustable: Something that can be changed (enlarged/reduced) from time to time.

Apparel: Clothing

Fashionable: Characteristic of or influenced by a current popular trend or style.

Maternity clothing: Clothing worn by pregnant women.

Maternity apparel: A garment that is made for and is worn by pregnant women.

Pregnant: A female person who is expecting a child.

Women: Is a female adult person above 20 years of age.

Working women: Women that work in an office environment.

CHAPTER TWO: LITERATURE REVIEW

2.1 Overview

This chapter explores literature related to the maternity apparels used by working pregnant women, the perceptions pregnant women have towards maternity clothing and seeks to find out the various styles of adjustable maternity apparels that have been created by fashion designers and innovators. The information acquired aided in the designing and production of adjustable maternity apparels for pregnant women.

2.2. Maternity apparels for working pregnant women.

For many decades during the 20th century, maternity wear was considered a fashion backwater. (Paula, 2007). Pinafores were the most common maternity style sold in maternity shops (Ross, Emily, Holland, Angus, 2006). However, with wide media interest in celebrity pregnancies beginning in the late 1990s, the maternity wear market grew 10% between 1998 and 2003 (Paula, 2007). The demand for maternity clothes was growing because women were working during pregnancy, and travelling, and going to social functions, so their clothing needs were greater and more diverse. These clothes should be comfortable, appropriate and fashionable (Cartney-Morley, Jess, 2006). Some of the styles include:

2.2.1 Trousers with Expandable Waist Band

These are trousers that are cut to accommodate the growing belly and don't cut off blood circulation, the apparels should be expandable for the expectant mothers (Rasel, Joy Sarkar and Shamsuzzaman, 2017). An informal survey showed that J. Brand, Paige Denim and Citizens of Humanity maternity jeans were bump-friendly, with elastic panels and designs a universe away from mom jeans. The elastic band is not visible unless one is in a crop top, so the jeans are perfectly wearable post pregnancy (Oliver, 2014).



Figure 1: Maternity trousers

source:http://summerglitz.com.my/media/catalog/product/cache/1/image/900x/040ec09b1e35df139433887a97daa66f/m/b/mb-mpants-dark_blue-new-f1.jpg

2.2.2. Empire Waist Line

An empire waist dress is one that has a fitted bodice, and waistline is placed above the natural waist, sometimes right below the bust. The skirt is typically long with a loose fit that *skims* the body and elongates the figure. This silhouette is especially flattering on women who are pear-shaped, bottom heavy figure or might want to disguise a thick waist (Davis, 2017). This helps to balance up the proportions, provided an answer in raising the waistline by a few inches and turning to all the favorite labels for the printed, textural fabrics women so adored (Milligan, 2017).



Figure 2: Empire waist dress

<https://bumpaliciousmaternity.co.uk/maternity-work-dresses/herringbone-smart-office-maternity-dress.html>

2.2.3. Layering.

Layering refers to putting on more than one apparel. For instance putting on a dress and then a jacket on over it. Layering has probably been a key strategy among the stylish for the past four centuries. However, it has acquired new urgency, what with seasonal unpredictability, frequent travel and unexpected blasts of cold air in the balmiest of workplaces (Armstrong, 2016). It is also advised that women choose a color that suits them, a loose coat or jacket, and for goodness sake not to forget shoes that make them smile. Layering gives the impression of a more put-together look that retained maximum comfort (Milligan, 2017).



Figure 3: Layered with jacket

Source: <https://www.pinterest.com/pin/575194183635088714/>

2.2.4. Dresses with Decorated Neckline.

Neckline emphasis is desired in maternity apparels. This not only draws the attention away from the expanding abdomen, but also attracts the eye to the face which should be emphasized. Some ways to incorporate design emphasis at the neckline are through contrast near the face or radiation from the neckline (Barbra Steinfield Furer, 1976).



Figure 4: Decorated neckline

Source: <http://www.asos.com/au/lipstick-boutique-maternity/lipstick-boutique-maternity-polka-dot-babydoll-dress/prd/3661090>

2.2.5. A-line Dresses

Musial (n.d), affirms that it is not surprising that the most popular cut for a maternity dress is an A-line, commonly referred to as a “baby doll” dress. This style de-emphasizes the protruding tummy while re-emphasizing childishness.

Some women are not ready to wear maternity clothes in the first trimester for one reason or another. Some women throughout their pregnancy choose to wear larger or looser regular clothes, rather than maternity clothes. Certain styles can accommodate changing size needs from the first trimester to term, these styles include sheath, shift and A-line dresses (Rasel, Joy Sarkar and Shamsuzzaman, 2017).



Figure 5: A-line dress

Source: <https://www.leaf.tv/articles/what-is-a-shift-dress>

2.3 Women’s perceptions towards maternity apparels.

As pregnancy places a woman’s body in a continual physiological and psychological adaptive state (Colman & Colman 1990), the physiological and psychological changes during pregnancy would probably affect women’s clothing preferences and wearing behaviors (Simone et al 2009). This makes some people think that pregnant women at times don’t care about their appearance. However, something people do not realize is that when one is pregnant, dressing can be a major fashion challenge even for the trendiest mom-to-be because the body is always changing, and one may not know which clothes in the closet are going to fit from day to day. Suddenly, one

dressing this body that seems totally foreign has no idea what is going to look good on it (Martinez, 2010). One of the biggest problems and misconceptions is that pregnant women do not want to appear smart yet a lot of pregnant women want to appear fashion forward and want to have a personal style that commands attention. These are some of the perceptions women have towards maternity apparels including:

2.3.1. Over decorated clothing

Decorating a apparel is a challenging concept, it may be overdone or underdone. The designs that are available for the working pregnant women don't look professional because they are over decorated, for example a post about Spain's pregnant defense minister Carme Chacon generated criticism of the overly girly design of many maternity clothes (Munoz, 2008). Many pregnant women choose to downplay the pregnancy (Klein, 2004). Such clothing reflects negatively on one's outlook or their ability to do their job.

2.3.2. Maternity clothes available look matronly.

Cindy Cuttler and Maureen Costello (2017) advice to working pregnant women is that in this period of business history is to downplay the pregnancy. This is the time to dress in maternity clothes that do not scream "I am pregnant!" to your co-workers and clients. In so doing you'll be able to divert people's attention from your belly to what you are saying especially in front of a large group and is not considered as a hindrance to your efficiency. The expectant mother should look fashionable and comfortable.

2.3.3. Not versatile enough

Versatile dresses are the dresses that can be worn to office, first date, family gathering or literally anywhere (Schuessler 2017). Maternity dresses are not versatile in a way that they are made for a single purpose during the pregnancy and cannot be worn after that. The last thing one wants then is an empire waist that will inevitably prompt some stranger to ask when one is due. That is why the pregnant women would rather spend their money on non-maternity clothes that are relatively cheaper than the maternity clothes that are really expensive. According to Christina (2010) for

each pregnancy one is justified to spend hundreds of dollars purchasing maternity clothes that can be worn after pregnancy, when one finally loses the baby weight.

2.3.4. Maternity clothing is expensive.

According to Christina (2010), maternity clothing for many pregnant women is quite expensive and therefore cannot justify spending a lot of money on clothes they will wear for a short while and abandon thereafter. Maternity clothing requires more material to make as compared to other clothes and they are used for a short period of time. According to Martinko (2014) one cannot justify spending \$75 on a shirt that was wearable for only a few months. The first time one walks into a maternity clothing store, one is shocked by how expensive everything is. People know that items in maternity shops are specialized to accommodate growing bellies. Women begin to understand firsthand how uncomfortable being pregnant is, when they are desperate to find and purchase something nice to wear.

2.3.5. Boosts self-confidence.

Pregnancy is one of the beautiful phases in a woman's life and during this phase the body undergoes various physical changes. This demands soft and comfortable clothing (Rasel, Joy Sarkar and Shamsuzzaman,2017). Dressing up during the time of pregnancy is also fun, as it boosts the self-confidence and sense of beauty in pregnant women (Sheetal 2015). A person's apparel no matter the size can enable them see themselves as more desirable, fashionable, and successful because they own a sought-after apparel item. The power of fashion to make one feel good about oneself should not be underestimated. With the various physical and psychological changes a pregnant woman experiences, a good dress or outfit goes a long way to boost one's self-esteem and confidence (G. Kleiverda, A. M. Steen, I. Andersen, W. Everaerd & P. E. Treffers, 1990) which goes a long way in affecting one's mood and productivity especially at work (Barbra Steinfield Furer,1976).

2.4. Adjustable of maternity apparels

It is a well-known problem of pregnancy that women require varyingly sized apparels to provide comfort and an attractive appearance during successive stages of pregnancy. This necessarily means that existing apparels require continual adjustment and or modification, or new apparels must continually be purchased to adjust for the varying size of the wearer. (Rasel, Joy Sarkar and

Shamsuzzaman,,2017). Furthermore, it is often necessary for special apparels, which are solely of use during pregnancy, to be purchased. Such apparels cease to be wearable after the birth of the baby and consequently are not fully used for the normal period of time that clothing apparels are usually worn. In all the above situations, considerable expense is incurred and the mother is eventually left with apparels which are of no practical use after child birth (Lindsay Hutton, 2016).

2.4.1 Removable elastic piece for a maternity apparel.

For a working mother this type can be costly and uncomfortable. For a career woman who becomes pregnant, looking professional necessitates her to buy several suits in several sizes to get her through the pregnancy. Few maternity suits are available, and those suits do not necessarily address all the issues of a pregnant woman's body during and soon after pregnancy. Many maternity apparels are not suitable for business situations because they have permanent maternity panels that can be bulky and cumbersome during early pregnancy.

The invention involves a maternity apparel that adapts to the changing body of a pregnant woman. Pants or a skirt have an elastic band that zips into the waistband. The band keeps the skirt or pants in place without the need for suspenders or a belt. The removable elastic piece can be applied to or removed from the waistband. The invention stretches over the belly disposing of the need for suspenders or a belt. The band is made of a stretch-type fabric known in the art, for example, spandex. The band is generally cylindrical to fit into the waistband of a pair of pants or a skirt. An edge of the cylinder is removably attached to an inside bottom edge of the waistband of the apparel. The opposite edge is positioned near the waistband of the wearer. (Pleasant Prairie, WI Patent No. 9,119.426 B1,2015)

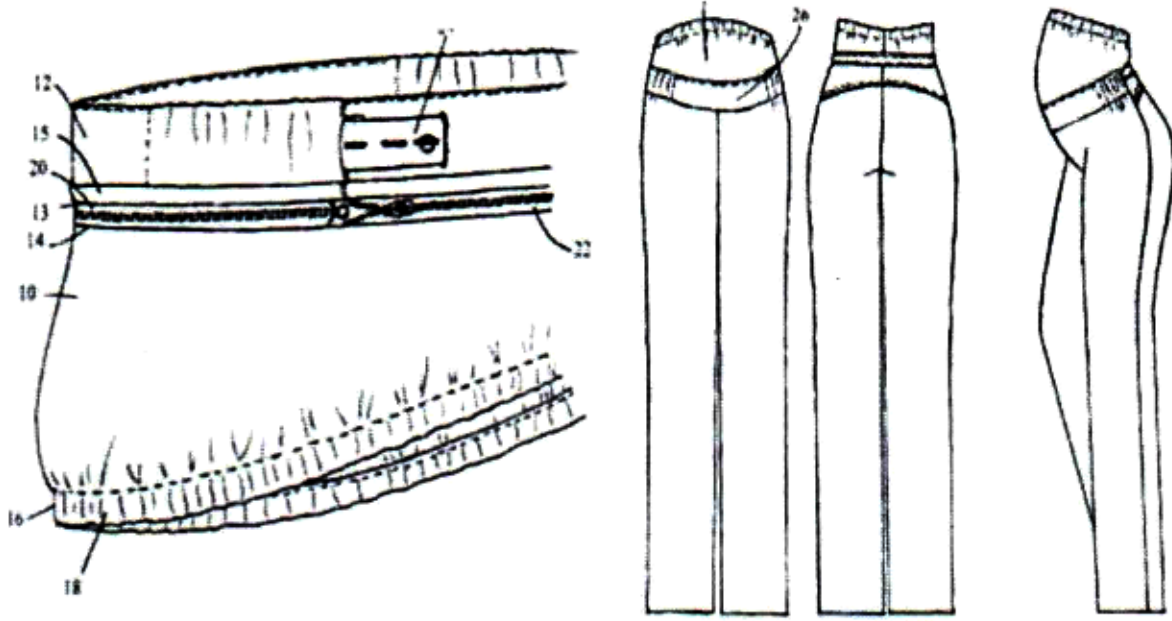


Figure 6: Removable elastic maternity apparel

Source: Pleasant Prairie, WI Patent No. 9,119,426 B1

2.4.2 Adjustable trousers

A waist adjustment mechanism for an apparel enables the waist size of the apparel to be easily and conveniently adjusted to accommodate the extensive range of waist sizes among individuals. The waist adjustment feature consists of a series of opposed fastening elements disposed along the interior surface of the waistband. Engagement of select ones of the opposed fastening elements reduces the waist of the apparel to the desired size. When used in connection with a pair of trousers, the trousers may optionally be provided with adjustable ankle portions which facilitate the wearer in putting his foot through the ankle openings (Hackensack, N.J Patent No. 5,033,125,1991).

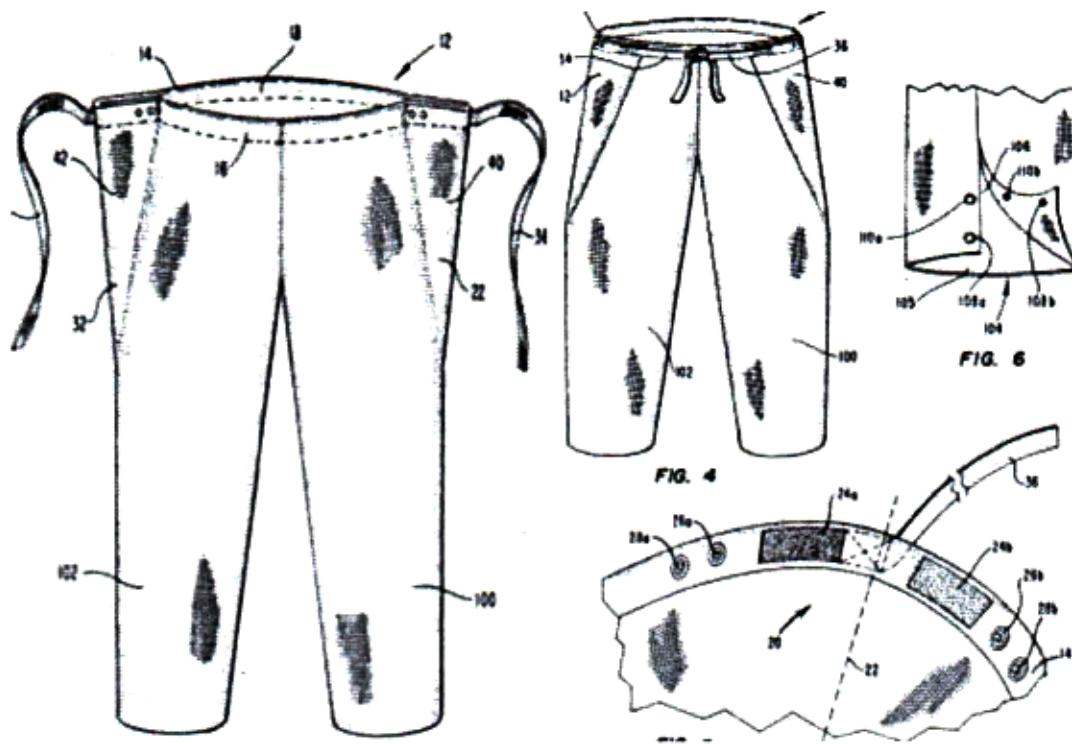


Figure 7: Adjustable trouser

Source: Hackensack, N.J Patent No. 5,033,125

2.4.3. Adding an extra piece to Maternity skirt,

This invention relates to maternity apparels, and more particularly to a maternity apparel adapted for conversion into a apparel for normal conformation. Because of the functional design problems involved practically all present-day maternity apparels are so designed that it is difficult, if not impossible, to alter or remodel the apparel for subsequent use as a normal apparel. In the usual case, a maternity skirt is constructed with a relatively deep U-shaped opening in the front with an expansible waistband. The obvious solution would be getting a matching in a panel of matching material to fill the opening, the U-shaped seam which would result would detract from the appearance of the skirt to a degree which most women would find objectionable.

It is therefore an object of the invention to provide a maternity apparel which may be remodeled readily into a apparel for normal conformation and appearance. This is done by having a seam at the center front of the skirt which can be opened and then turned back inwardly toward

the sides of the skirt in the form of inwardly turned triangular lapel portions. The folding of the skirt in the above manner thus creates a V-shape. A vertically pleated panel is then secured to the waist band of the skirt to hang downwardly on the inner side of the skirt.

As the stage of expectancy advances, pleats may be removed from the insert panel to enable expansion (Duncan, Okla Patent No. 3,089,149,1963).

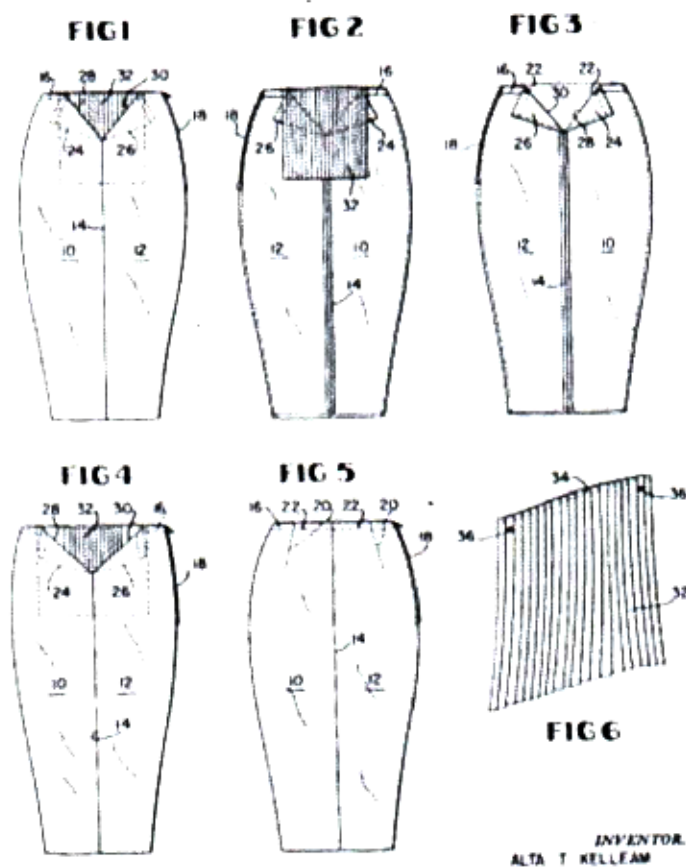


Figure 8: Maternity skirt

Source: Duncan, Okla Patent No. 3,089,149

2.4.4. Adding fasteners to Maternity dresses.

Fasteners are the essential part of a fastening system used to hold together at least two pieces of material. Apparel fasteners are either permanent or temporary (LaBat 2017) They include buttons, hooks and eyes, hoops, belts, zippers, buckles, cords, eyelets, glass studs, frog fasteners to mention but a few.

Hannah .E. Reno in 1949 invented a maternity dress that was adjustable to maintain the front hem at a uniform height regardless of the waist measurement. The maternity dress also disguised the figure by producing and maintaining fixed dress lines. Another feature of the dress was that it was not designed to follow any vogue pattern or style and disguise the figure of the wearer. And finally the dress could be worn during pregnancy because it had adjustment to provide for enlargement. The maternity dress features gores, panels, pleats and fastenings like hooks and eyes, snaps and ties. All these are to allow the apparel to be adjustable so it remains wearable all through the pregnancy.

The design solves many of the problems a pregnant woman faces with the conventional maternity clothing. Though this design has a flaw whereby the ventilation is not put into consideration as the design features long sleeves and a very high neckline which doesn't flatter the ever growing bust.

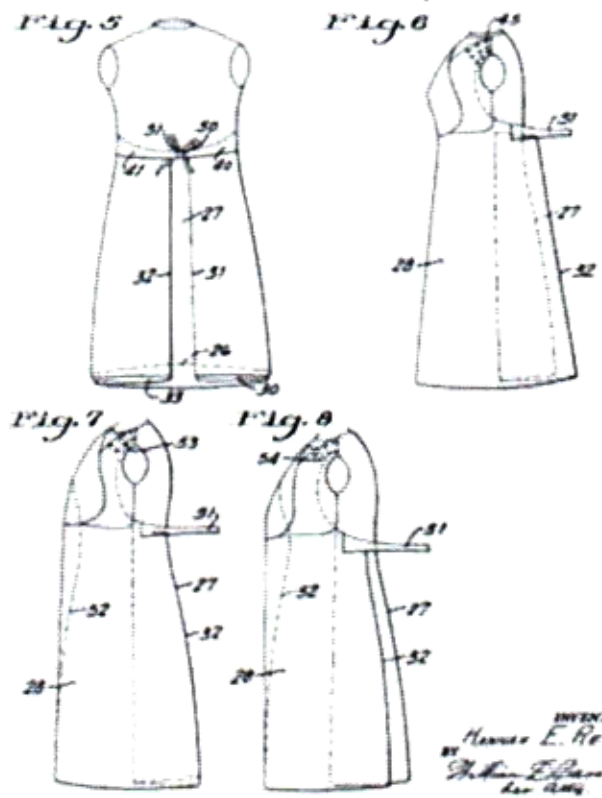


Figure 9: Maternity dress

Source: Crafton Pa Patent No. 2,462,553

2.4.7. Unitary swim suit

Unitary apparels such as Women's bathing suits, exercise suits, and leotards, are popular because of their ease of wear and use, and for other reasons of style. They are often made of knit and elastic materials and are tight fitting. As a result, they can be difficult to put on and take off, especially when wet. In addition, every visit that a wearer makes to the bathroom requires a complete removal of the outfit, and subsequent re-dressing. A solution women have adopted is to wear 2 piece outfits but it doesn't offer full torso coverage. One-piece bathing suits, having removable portions to facilitate dressing and bathroom visits are well known in the prior art. However, none of the designs teaches truly convenient or inconspicuous fastening mechanisms. These and further objects are achieved by providing a unitary apparel for full or partial coverage of a torso that may be fully put on or removed, at the choice of the wearer, as an assembled or a disassembled apparel, and subsequently may be partially removed and put on, again at the choice of the wearer. The apparel comprises a torso portion for providing at least some coverage of the front and back of a wearer, a pants portion having a front portion, a crotch portion for passing between the legs and connected to the front portion, and a seat portion connected to the crotch portion. One of the seat portion and front portion is connected to the torso portion, and the other of the front portion and seat portion has at its edges first fastening elements to selectively attach and release to assemble and disassemble the apparel (Indian Springs Patent No. 5,956,765,22).

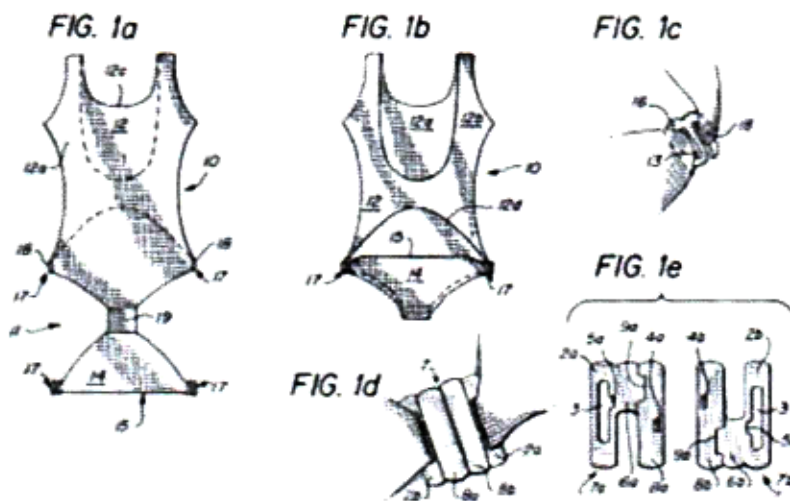


Figure 10: wholly and partially removable apparel (Unitary swim suit)

Source: Indian Springs Patent No. 5,956,765,22

CHAPTER THREE: METHODOLOGY

3.1 Overview

This chapter covers the research design, area of study, target population, sample size and sampling techniques. Other details included are the data collecting tools and data presentation methods.

3.2 Research Design

The researcher used a case study research design because the nature of the study was descriptive in nature, given that the study focused on designing adjustable maternity apparels for working pregnant women.

3.3 Target Population

In order to get valid responses, the research targeted the women both pregnant and not that were working in the selected Banks in Kampala. The particular group of people was chosen because they had knowledge about the dilemma of being pregnant (either through experience or observation) in a corporate environment. The regulations of the banks require the employees to appear smart and presentable to the customers. Fifty (50) respondents were selected to take part in the study.

3.4 Sample Size and Sampling Techniques

The sample size consisted of fifty (50) respondents in total. Thirteen (13) were pregnant women and thirty-seven (37) were women, not pregnant. The pregnant women were purposively selected because the researcher wanted respondents who were pregnant and had knowledge about apparels designs for pregnant women. The non-pregnant women were randomly selected, five women were selected from each bank. The researcher aimed to get three pregnant and two non-pregnant. The two non-pregnant were added because it is not easy to find many pregnant women working in the bank at the same time. And where the number of pregnant women was not totaling to 3, the non-pregnant women were added.

Table 1:showing respondents.

Type of respondents	Number of respondents	% of respondents
Pregnant women	13	26%
Women	37	74%
TOTAL	50	100

The women were selected from 10 different banks because banks have a strict dressing code. The banks include; Stanbic Bank, Centenary Bank, Standard Chartered Bank, Bank of India, DFCU Bank, Tropical Bank of Africa, Barclays Bank, Equity Bank, KCB and Eco Bank.

Table 2:Showing selected banks used.

Bank	Respondents	%
Stanbic Bank (Crested Towers)	5	10
Centenary Bank(Mapeera)	5	10
Standard Chartered Bank (Speke Road)	5	10
Bank of India (Jinja Road)	5	10
DFCU Bank	5	10
Tropical Bank of Africa (Kampala Road)	5	10
Equity Bank (Katwe)	5	10
KCB (Kampala Road)	5	10
Eco Bank (Parliamentary Avenue)	5	10
Total	50	100

3.5 Data collection techniques

The researcher used questionnaires, participant observation, library review and studio experiments to gather information for the study.

3.5.1. Questionnaires

The questionnaires were administered to the pregnant women to collect data on their views about maternity apparels and the features suitable for the pregnant woman. The use of questionnaires was preferred to allow quick responses and reliable expression of opinion by the respondents.

3.5.2. Participant observation

Observation was used as a research instrument to identify the types of maternity apparels worn by pregnant women. Photography was used to collect using the observation technique.

3.5.3 Library Review

The researcher used various documented sources of information related to the study which included journals, newspapers, blogs, articles and the internet data collected contributed to building the literature review and background information of the study.

3.5.4 Studio Experiments

The researcher made use of the studio to try out different adjustable features and also the possibilities in line with combining embroidery and screen printing techniques. Embroidery was limited to running stitches and experimented with using various types of threads.

3.6 Reliability and Validity

The researcher discussed the interview guides with her supervisor so as to determine their validity. The researcher also tested the interview guides on a small sample of the target group so as to test its accuracy. The preceding steps were taken so as to ensure that the tools employed would be viable for the study and also to minimize on the possible errors.

3.7 Ethical Considerations

On securing permission and authority to commence from the Department of Art and Industrial Design of Kyambogo University, the researcher started the distribution of questionnaires. The researcher used the permission to ensure the participants' confidence and would conduct the interviews so as to ensure maximum impartiality.

CHAPTER FOUR: PRESENTATION AND DISCUSSION OF THE FINDINGS

4.1. Overview

This chapter presents findings of the study based on the data that has been collected basing on the objectives of the study. The first objective sought to analyse the different maternity designs used by working pregnant women. The second objective required the researcher to find out the perspective pregnant women have towards maternity apparels then the third objective sought to design and produce adjustable maternity apparels. The findings were gathered using photography, questionnaires and studio experiments so as to find out if there was any potential in the selected designs and fabric decoration techniques.

4.2. Bio data of respondents

4.2.1 Age of respondents

The respondents were asked to indicate their age, table below presents their responses.

Table 3: Age of the respondents.

Age	Frequency	Percentage
20-30yrs	30	60%
30-40yrs	15	30%
40-50yrs	2	4%
Total	50	100%

According to table 3 above 60% of the women were of age between the age of 20-30, 30% (15) of the women were of 30-40 years of age. The majority of the women were between 20-30yrs because they are of working age. There are a few aged women working in the bank.

4.2.2. Number of women who were pregnant.

The respondents were asked if they were pregnant.

Table 4: Number of pregnant women.

Responses	Frequency	Percentage
Not pregnant	37	74%
Pregnant	13	26%
Total	50	100%

Table 4 above shows that 74% of the women were not pregnant while only 26% of them were pregnant and this could be due to the fact that many people, including supervisors, co-workers, and subordinates, continue to hold negative stereotypes towards pregnant workers because they believe that they limit group productivity and that the organizations make too many concessions for them (Gueutal, & Taylor, (1991).

4.3. Type of maternity wear

4.3.1. Maternity Styles.

The respondents were asked what kind of maternity styles they preferred for work. The figure 11 below presents their responses.

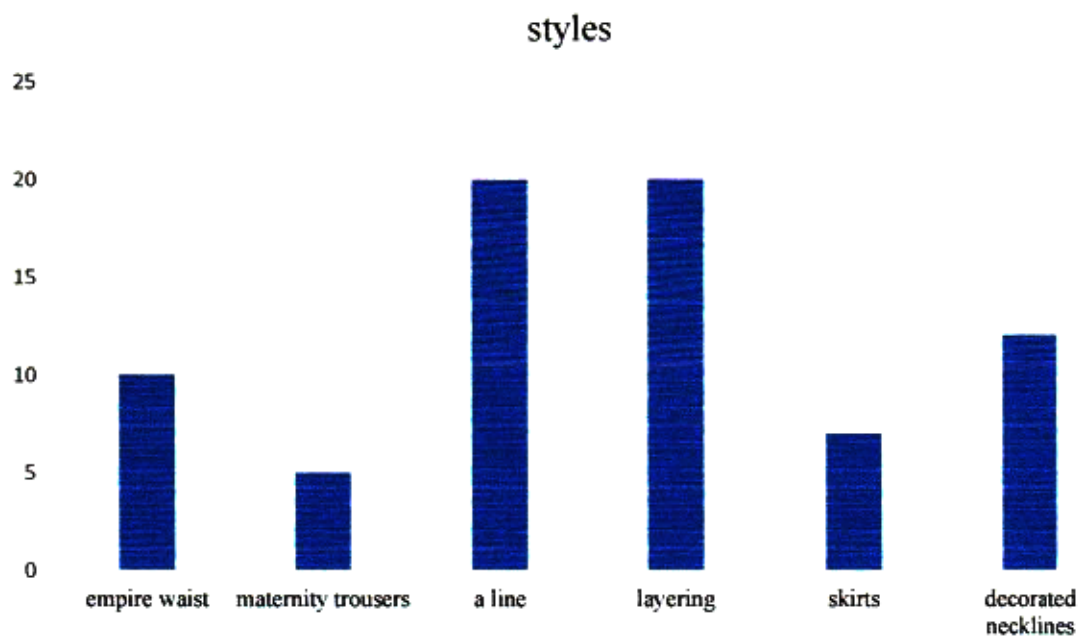


Figure 11: Maternity styles

There are many styles or fashions for maternity apparel. These include: Empire waist, Expandable trousers, Free dresses (A-line), stretch leggings, layering, *kitenge* to mention but a few.

According to figure 11, A-Line and layering at 40% (20) each were ranked number one style/fashion. These were desired because they are free shape that accommodates the growing tummy and were also comfortable and flattering for the pregnant shape. This is in agreement with Musial (n,d) who affirms that the most popular cut for a maternity dress is A-line, commonly referred to as a baby doll. This style de-emphasizes the protruding tummy. Layering is also favored because most ladies use their non-maternity apparels especially of stretch material and have a jacket, sweater or a throw on which is cost effective for many pregnant women especially the younger ones. Layering gives the impression of a more put-together look that retained maximum comfort according to Milligan (2017).

Decorated neckline was ranked third at 24% (12) as this keeps the attention off the extended tummy. According to Milligan (2017) clever tweaks keep attention where one wants it and not at the bump.

Empire waist was ranked fourth at 20% (10). The dress looks like an ordinary dress with a slightly raised waist. According to Davis (2017) empire waist is flattering for women who are pear shaped and this helps to balance up the proportions. This means not many people can put it on with ease as this tends to discriminate in body shape. However, according to Milligan (2017) raising the waistline by few inches and turning to all favorite labels for the printed, textural fabrics makes it so adorable.

Maternity Skirts were ranked fifth at 14% (7). Maternity trouser was ranked sixth at 10% (5) because they are not comfortable and they are constricting around the thigh and tummy area. This is in agreement with Cartner and Jess (2006) who emphasizes that maternity clothes should be comfortable, appropriate and fashionable. However, these skirts and trousers can be made comfortable and fashionable with a few adjustments. The waist adjustment feature consists of a series of the opposed fastening elements disposed along the interior surface of the waistline. (Kim de la Villefromomy *et al* 2017).

4.3.2 Accessibility of maternity wear.

The respondents were asked if they easily accessed the maternity apparels for work. Table 5 presents their responses.

Table 5: Accessibility of maternity wear.

Responses	Frequency	Percentage
Yes	35	70%
No	15	30%
Total	50	100%

According to table 5 above, 70% of the respondents said that they could easily access maternity apparels because most of the pregnant women had their clothes tailor made. As their bodies change, so do the clothes therefore these ladies keep on making new apparels as the pregnancy advances which is quite expensive in the long run. 30% (15) of the respondents indicated that maternity clothes were quite hard to find because most of what was available wasn't work appropriate and those that were appropriate were expensive so these ladies found it illogical to purchase something that would be worn for a short period of time.

4.3.3. Desired features for maternity apparels.

The respondents were asked what features they would like to be added to the maternity clothes.

Table 6 below presents their responses.

Table 6: Desired features for maternity apparels.

Responses	Frequency	Percentage	Rank
More room	27	54%	1
Necklines	15	30%	4
Fasteners	25	50%	2
No adjustments	20	40%	3
Pleats and gathers	10	20%	5

Table 6 above ranked more room at 54% (27) as number one. Most women wanted more room in the maternity apparel to allow them feel comfortable. This is in line with Sankar et al (2017) who agrees that clothes should be cut to accommodate the growing belly and not cut off circulation. Expectant mothers should look fashionable and comfortable.

Fasteners at 50% (25) were ranked as number two. Many women believe that maternity apparels with fasteners are comfortable during pregnancy because they can allow adjustment to make the wearer feel comfortable.

No adjustment was ranked number three 40% (20). Quite a good number of women do not want adjustments on their maternity wear. They say these adjustments make the apparels

uncomfortable and less fashionable. This is in line with Blalock (2014) who argues that some of these designs are not work appropriate like the bow placed at the belly and starchy fabrics that attracts attention towards the growing belly.

Pleats and gathers at 20% (10) were ranked fifth. Most of the women did not want maternity with pleats or gathers because they appear old fashioned, very heavy and uncomfortable. According to Costello (2017) expectant mothers should look fashionable and comfortable.

4.4. Perceptions women towards maternity wear

The respondents were asked about the perceptions they had towards maternity wear. The figure 12 below presents their responses.

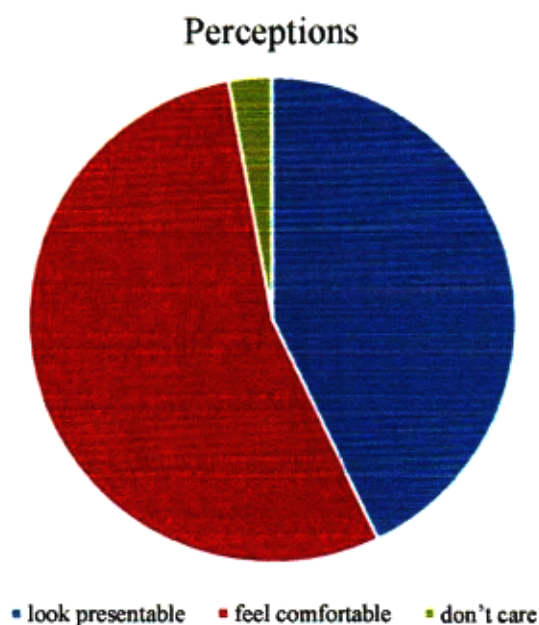


Figure 12: Pregnant women's perceptions towards maternity apparels

According to figure 12 above 38% of the respondents said that maternity apparels which are good are mostly comfortable. It was mostly noted that during pregnancy comfort more than anything was their greatest need. According to Cartner-Morley and Jess (2006) maternity clothes should be comfortable, appropriate and fashionable. 2% of the respondents didn't care about maternity apparels because they (respondents) were irritable and a pregnant belly was something typically out of place in the work environment and also, they felt sick and tired most of the time. This is in agreement with Schuessler (2001) who believes that maternity dresses are not versatile in a way they are made so they cannot be worn to office.

4.4.1. Challenges of finding appropriate maternity apparel

The respondents were asked about the challenges they faced with the maternity apparels available to them. Table 7 below presents their responses.

Table 7: Challenges of finding appropriate maternity apparels.

Responses	Frequency	Percentage
Yes	35	70%
No	15	30%
Total	50	100%

Table 7 shows that 70% (35) of the women accepted that they had challenges with maternity apparels. The challenges included: clothes not being reusable after the pregnancy, the clothes being expensive, not fashionable and not work appropriate. This is line with Costello (2007) who agrees that pregnant women have challenges with maternity wear because they scream "I'm pregnant!" yet most of the ladies chose to down play the pregnancy as this would make their clients and fellow employees look at them as inefficient because of the pregnancy. 30% (15) of the respondents had no challenges with maternity apparels. The ladies without challenges could afford the maternity apparels and while others did not mind what they put on because they only considered being comfortable during pregnancy. According to Bostock (2006) the demand for maternity clothes was growing because women are working during pregnancy, and travelling, and going to social functions, so their clothing needs are greater and more diverse. These clothes should be comfortable appropriate and fashionable.

4.4.2. Consideration when selecting a maternity apparel.

The respondents were asked about what they looked for when purchasing a maternity apparel. Figure 13 presents their responses.

Considerations by pregnant women for outfits

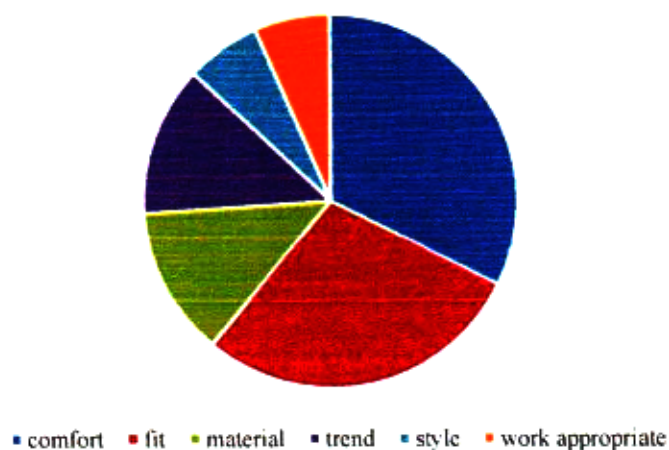


Figure 13: Consideration by pregnant women when selecting outfits.

There are so many factors expectant mothers put into consideration when selecting maternity apparels. These factors are based on social-economic, cultural, religious, academic, physical and environmental factors.

According to figure 13, comfort at 50% (25) ranked number one factor for women selecting clothes during pregnancy. With the physiological changes in pregnant comes the psychological changes so the expectant mother needs to be comfortable. Colman & Colman (1990) state that as pregnancy places a woman's body in a continual physiological and psychological adaptive, the physiological and psychological changes during pregnancy would probably affect women's clothing preferences and wearing behaviors. Cartney-Morley, Jess, (2006) agree that the maternity clothes should be comfortable, appropriate and fashionable. This is also in line with Sankar et al (2017) who agrees that clothes should be cut to accommodate the growing belly and not cut off circulation. Expectant mothers should look fashionable and comfortable.

Fitting at 44% (22) was ranked second. Many of the women said they wanted fitting clothes so as to show off the joy of the impending motherhood. This is contrary to what Costello (2017) says that expectant women do not like clothes which scream "look here am pregnant".

Material and trend were ranked third at 20% (10). There is a general misconception that pregnant women do not care about their looks. This is in line with Martinez (2010) who believes that one of the biggest problems and misconceptions is that pregnant women don't want to

appear smart yet are a lot of pregnant women want to appear fashion forward and want to have a personal style that commands attention.

Style and appropriateness were ranked fifth. Most women wear maternity apparels for comfort. Very few women are bothered by style and appropriateness. According to Ho (2009) the physiological and psychological changes during pregnancy would probably affect women's clothing preferences and wearing behaviors and this makes some people think that pregnant women at times don't care about their appearance.

4.4.4. Use for maternity apparels post-delivery.

The respondents were asked to indicate what they did with their maternity apparels post-delivery. Figure 14 presents their responses.

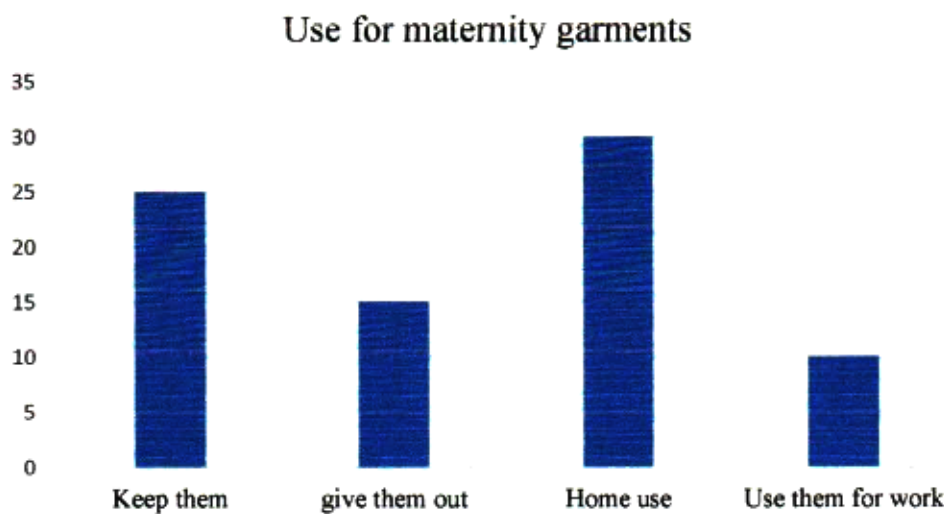


Figure 14: Use for maternity apparels post delivery

Fig 14 above shows that 60% (30) of the respondents stated that they used the maternity wear for home use after delivery. Most women did not want to buy expensive and posh maternity wear because they could not use them for work after delivery. According to Martinko, 2014 one cannot justify spending a lot of money on a cloth which is going to be wearable for a few months.

50% (25) of the women said they kept the maternity wear hoping to use them again in future when they became pregnant again. The main disadvantage about keeping the apparel is that it may not be fashionable or the wearer may have changed in size, hence not appropriate. According to Hutton (2016) such apparels cease to be wearable after the birth of the baby and

consequently are not fully used for the normal period of time that clothing apparels are usually worn. This is in line with Christina (2010) who believes that pregnant women can't wear the clothes they used during subsequent pregnancies because they are piled, faded, look like were washed with an iron brush, and were designed to look nice for about 2 months and then fall apart.

30% (15) of the respondents agreed that they gave away the used maternity apparels after birth because they had no use for them. According to Hutton (2016) considerable expense is incurred and the mother is eventually left with apparels which are of no practical use after child birth. The mother is forced to give away maternity clothes after delivering because she has no use for them.

20% (10) of the respondents agreed that they used maternity apparels for work, this is because the maternity apparels they use during pregnancy can be adjusted to fit a not pregnant body. The apparels can be adjusted by adding either pleats, gathers, elastic bands, extra material or fasteners and can be used when one is no pregnant. Christina (2010) agrees that for each pregnancy one is justified to spend hundreds of dollars purchasing maternity clothes that can be worn after pregnancy, when one finally loses the baby weight. Christina (2010) emphasizes that pregnant women cannot wear the clothes they used during pregnancy after the pregnancy.

4.5. Designing adjustable apparels for pregnant women.

The researcher got inspiration from the designs that already existed for non maternity apparels and shapes. These were designs chosen because they could be adjusted to accommodate a growing belly. These designs were chosen to keep the pregnant woman feeling as normal as possible because the apparel can be worn as she was pregnant and after. The researcher also tasked herself to create fabric designs for the maternity apparels to create unique designs and sources of inspiration were found. Various types of African pots were selected due to their shape that is reminiscent of a pregnant woman's shape and also to maintain authenticity of the designs. The shapes and textures from the pots were used as sources of inspiration for the fabric designs. Below are the design processes and final products:

Design 1: Peplum pizazz

A peplum is a short gathered or pleated strip of fabric attached at the waist of a woman's jacket, dress, or blouse to create a hanging frill or flounce (Dictionary).

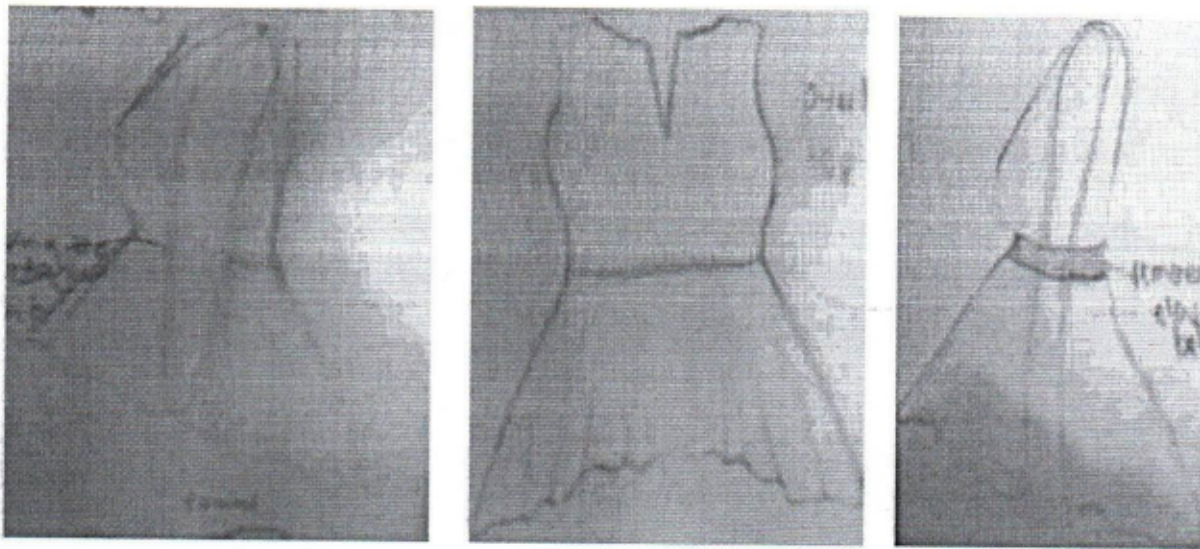


Figure 15: Peplum design inspiration

Source: Photo by researcher

The design eliminates the side seam to allow for the apparel to be worn at any stage of the pregnancy. The bodice is held together by an elastic belt.

The researcher made several developmental studies of the possibilities of the design and a final design was chosen. The researcher then chose to create surface designs for the fabric because she wanted to have a fabric that complimented the design. The researcher got a source of inspiration for the surface designs and came up with a motif that was applied on a fabric and then embroidered. Patterns were drafted and cut then applied onto the fabric that was later sewn to create the final apparel.



(i)

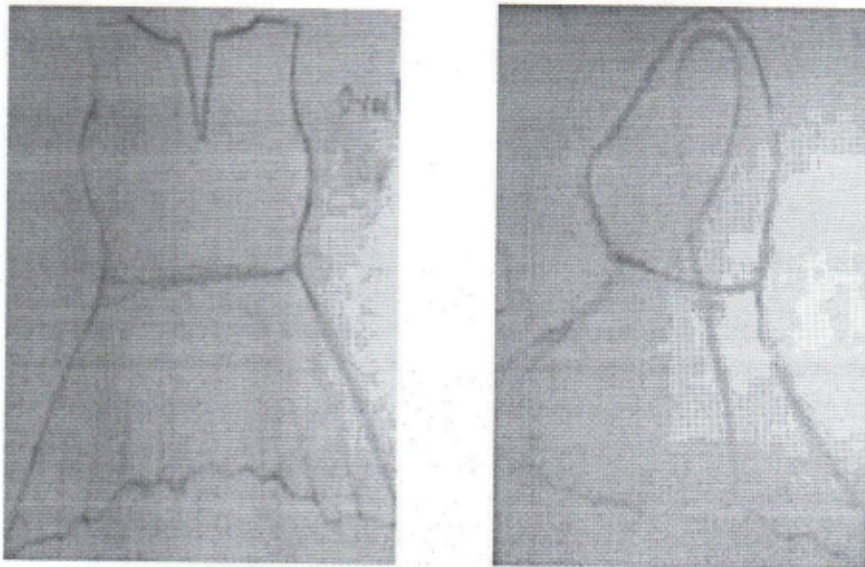
(ii)

(iii)

Figure 16: Developmental studies for peplum pizazz (i,ii,iii)

Source: Photo by researcher

The researcher thought of how the peplum design could accommodate the ever changing pregnant body. The researcher decided to do away with the side seams to allow expansion at will.

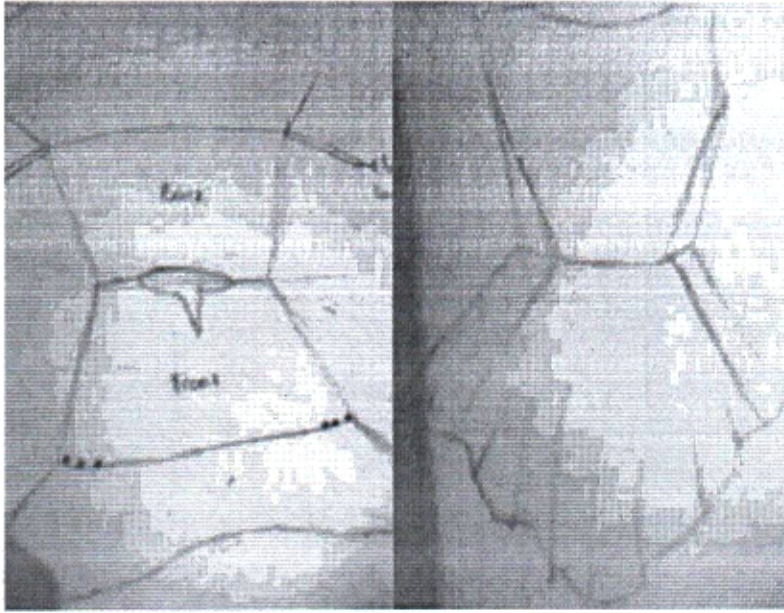


(iv)

(v)

Figure 17: Developmental studies (iv,v)

Source: Photo by researcher



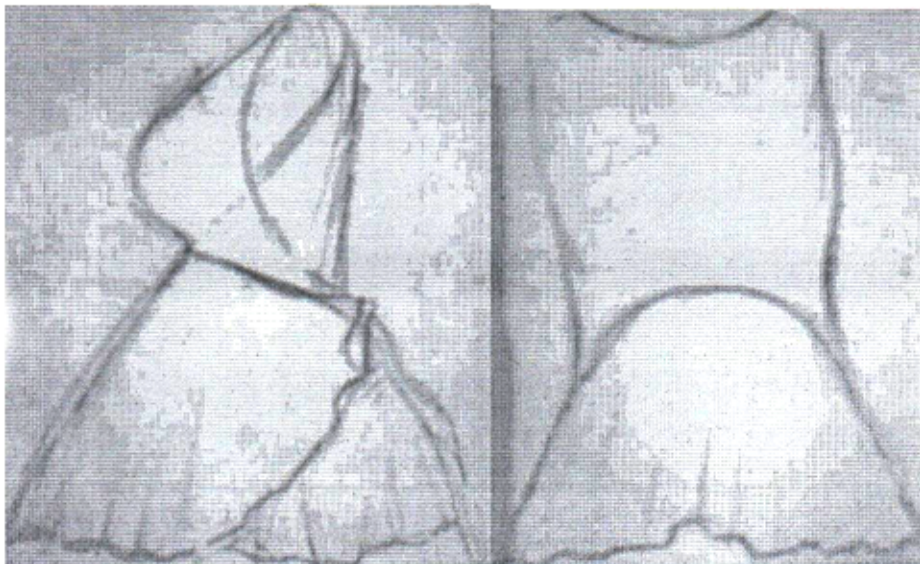
(vi)

(vii)

Figure 18: Developmental studies (vi, vii)

Source: Photo by researcher

For this design, it has the peplum at the front that extends into belts that tie at the back. The peplum at the back has an extension that goes quarter way the front section.



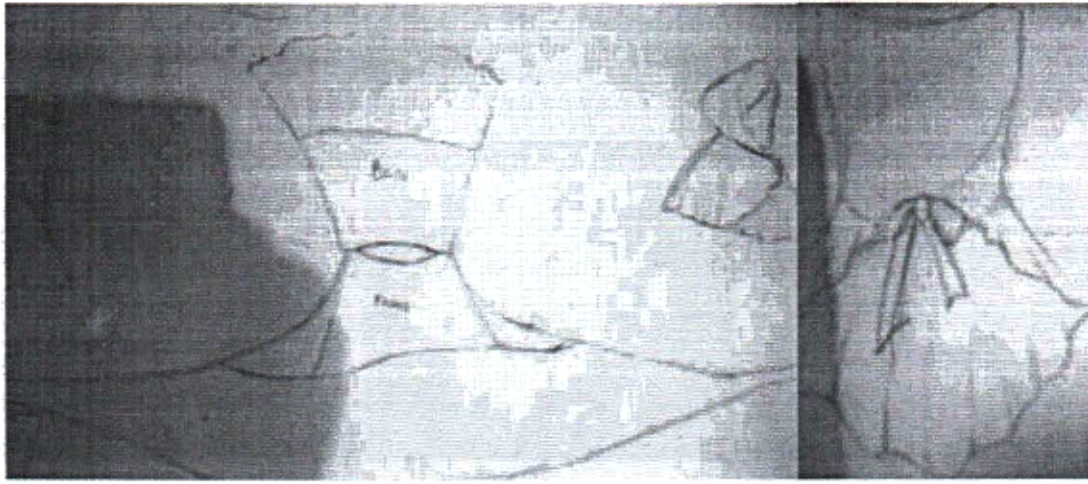
(viii)

(ix)

Figure 19: Developmental studies (viii,ix)

Source: Photo by researcher

The front and back pieces overlap each other so as to provide cover for the wearer.



(x)

(xi)

Figure 20: Developmental studies (x,xi)

Source: Photo by researcher

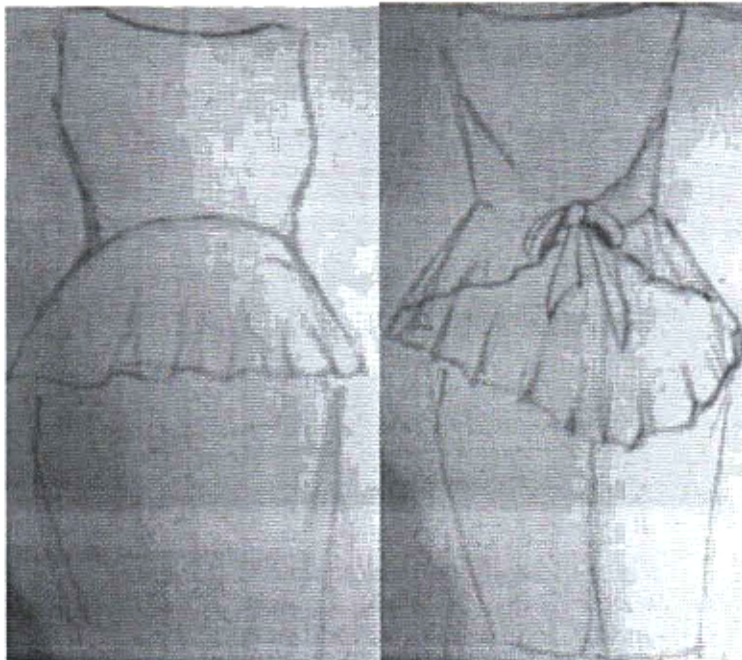


Figure 21: Final design

Source: Photo by researcher

The design has no side seams which is like a one size fits all and is able to accommodate the growing belly at all stages of the pregnancy.

The texture on the pot was what was taken as a source of inspiration for the fabric designs.



Figure 22: Inspiration- *Buganda* pot

Source: <http://ohiocraft.org/ocm-exhibitions/past/2014-2/in-touch-with-the-spirit/djenne-red-glaze-flask/>

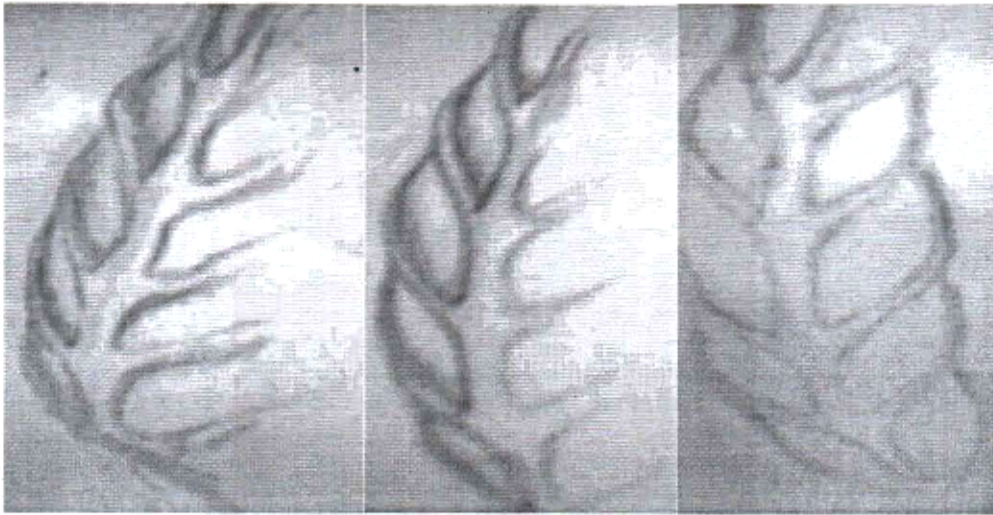


Figure 23: Developmental studies of the pot

Source: Photo by researcher

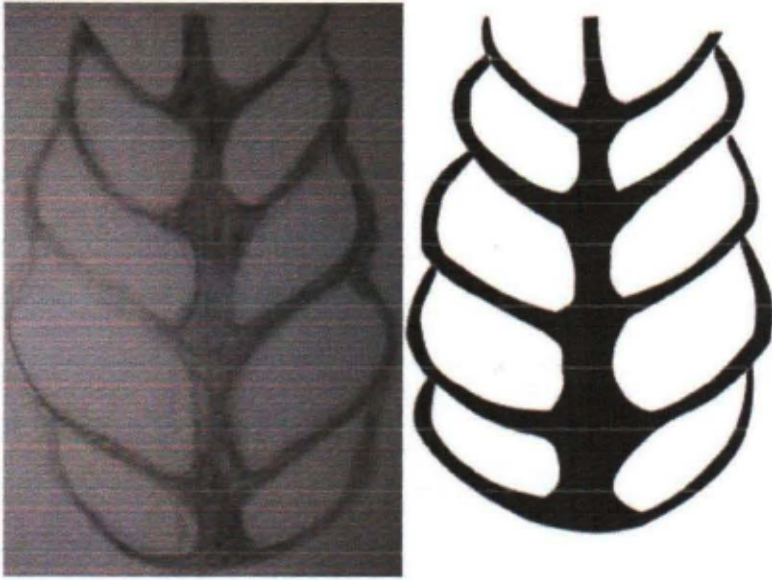


Figure 24: Motif

Source: Photo by researcher



Figure 25: A repeat of the motif

Source: Photo by researcher

Screens and fabrics were prepared for printing and the printing process was started by applying black paste to the fabric and then allowed to dry.

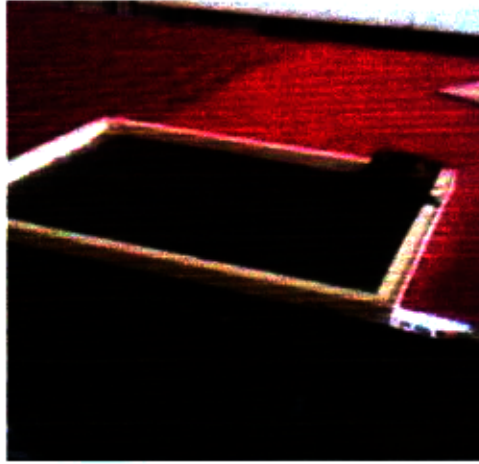


Figure 26: Screen printing

Source: Photo by researcher

The embroidery is added to the fabric as a final touch. A running stitch was used so as not to overwhelm the pattern.



Figure 27: Embroidery

Source: Photo by researcher

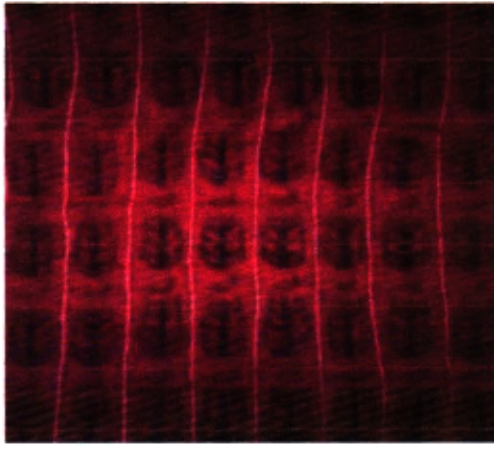


Figure 28: Finished fabric

Source: Photo by researcher

Patterns were drafted and then cut from the fabric in preparation for the sewing.

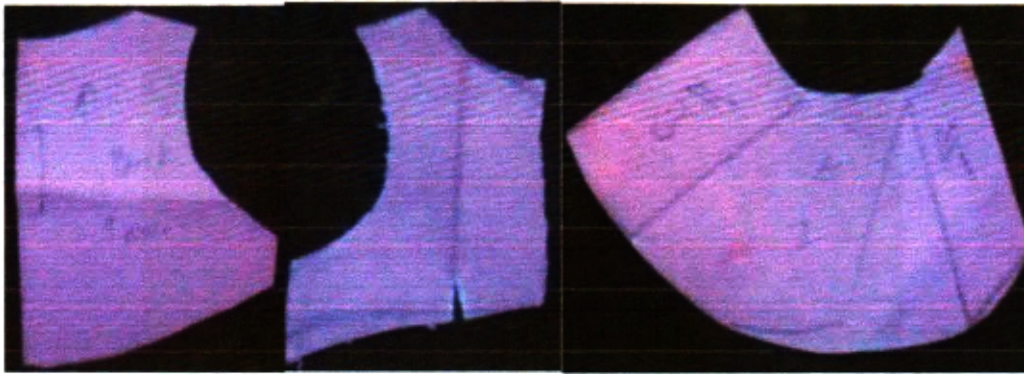


Figure 29: Drafted patterns for the designs

Source: Photo by researcher

The patterns were traced onto the fabric was then cut. The peplum was made very wide at the back and at the front it extends into a belt to create design that would be an adjustable formal maternity apparel. The pieces were sewn together to make the complete apparel.



Figure 30: The apparel being sewn

Source: Photo by researcher

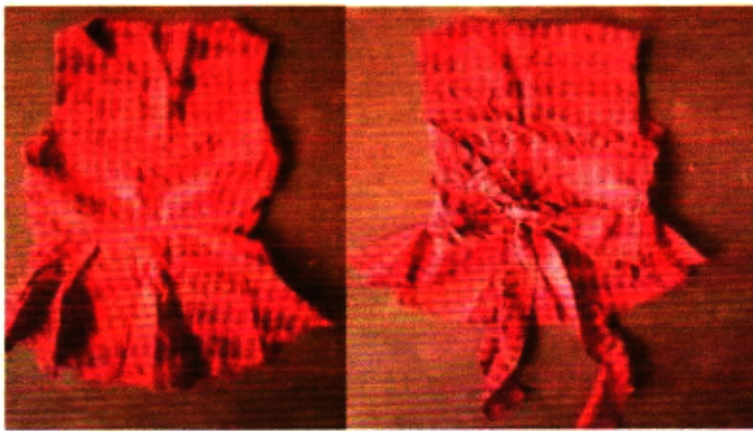


Figure 31: Finished apparel

Source: Photo by researcher

The apparel is made of two flaps that have wing like extensions to allow for expansion. The front part has extensions that form belts that tie at the back and the back part has shorter extensions to cover up the wearer.



Figure 32: Apparel on a model

Source: Photo by researcher

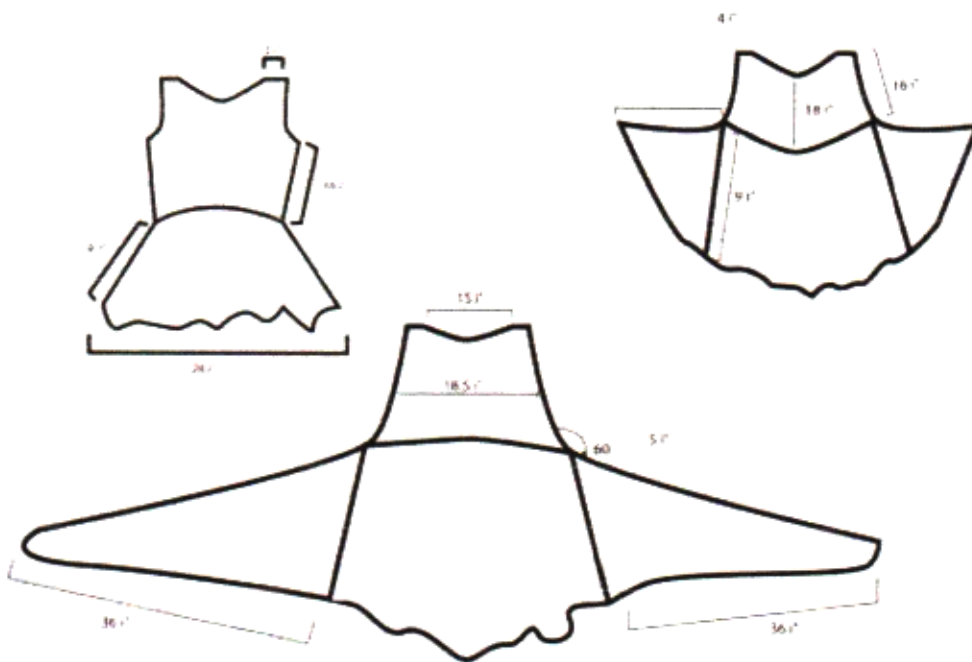


Figure 33: Scaled image of peplum pizzazz

Source: Photo by researcher

Design 2: Shift chic

Sarah York (2016) defines the “shift dress” as a short, sleeveless dress that hangs from the shoulders. It is suitable for all body types and sizes - anyone can wear the solid design. The dress is usually worn alone or with stockings and has been popular since the 1960s. Though it is easy to shift or move around in a shift dress, the term signifies a shift in culture. When the dress became popular in the late 1950s, American youth culture was at its height. The dress represented the youthful, free and revolutionary attitudes of the time.



Figure 34: Shift dress design

Source: <https://www.leaf.tv/articles/what-is-a-shift-dress/>

The shift dress design was chosen as a source of inspiration for the dress design because of its roomy shape. The design the researcher created took fullness of the apparel and an inverted pleat at the front to allow extra room for expansion of the torso since it's the area that experiences the biggest change during pregnancy, with a string at the front to help maintain some shape and tame the fullness.

The dress has the shape of a shift dress and has adjustments at the centre front and the centre back. There's an inverted pleat at the front whose size is controlled with laces and the back has a gore so as not to over extend the shoulder length. One can adjust the laces to maintain the shape and control the volume as required.



Figure 35: Sketches of the designs

Source: Photo by researcher

The selected inspiration was from a pot and the texture was hand drawn, developed into simple line drawings and then later turned into a digital image that was later repeated to create a pattern.



Figure 36: Inspiration- *Buganda* pot

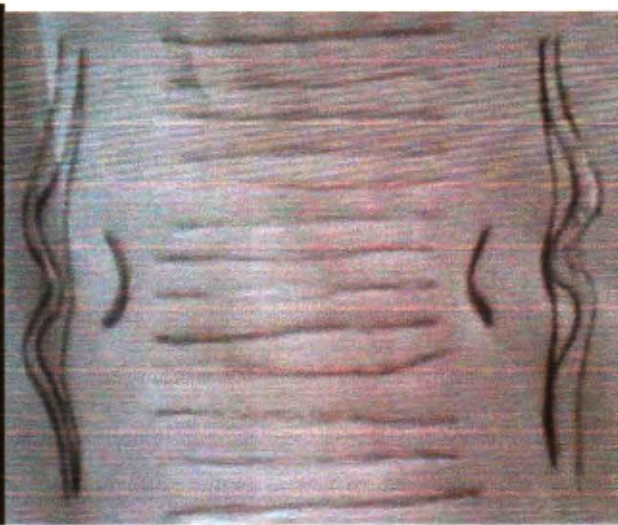


Figure 37: A sketch of the pot

Source: <https://www.pinterest.fr/pin/145522631685136592/>

Source: Photo by researcher

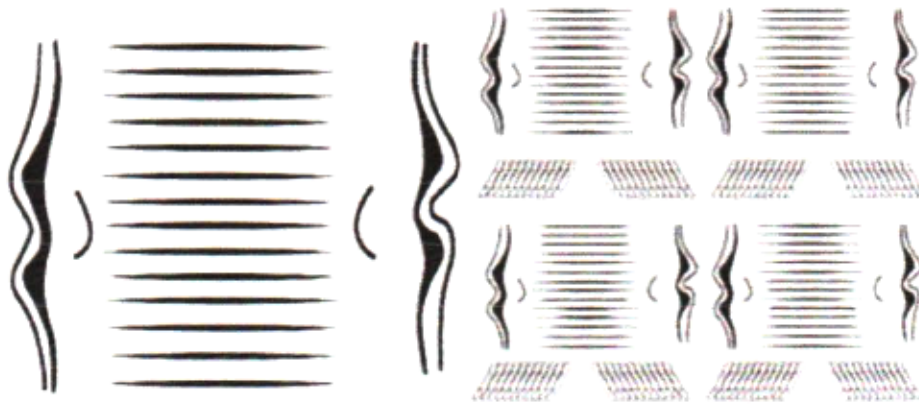


Figure 38: A digital version of the design

Source: Photo by researcher

Figure 39: Motif

Source: Photo by researcher

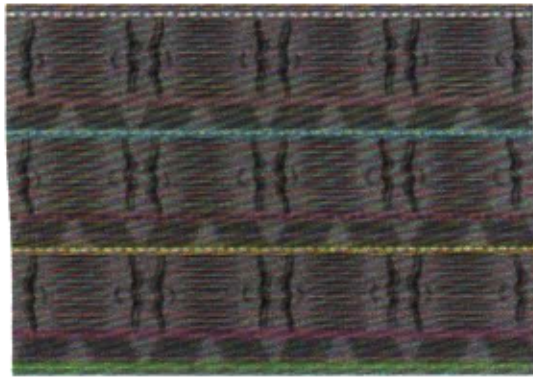


Figure 40: A repeat of the motif

Source: Photo by researcher

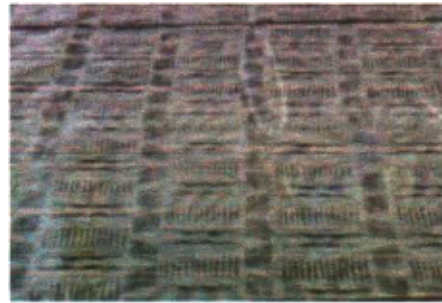


Figure 41: Screen printing process

Source: Photo by researcher

The fabric was embroidered to improve on its aesthetic by using a straight stitch so as not to overpower.



Figure 42: Embroidery process

Source:Photo by researcher

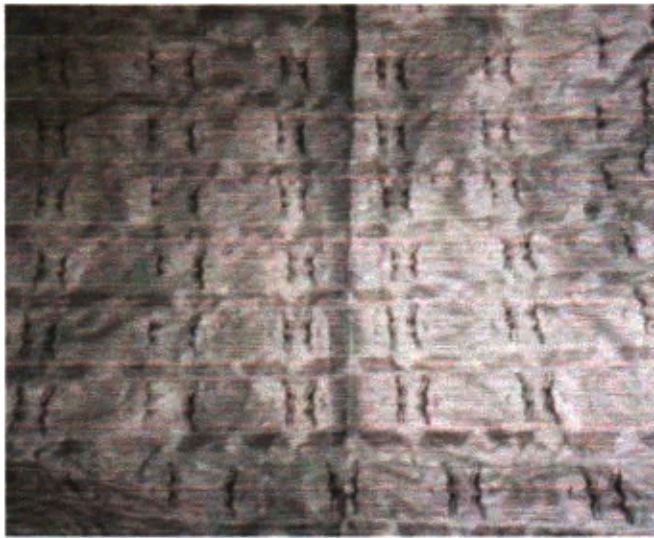


Figure 43: final product

Source:Photo by researcher

The respective patterns were drafted and cut out then traced on to the fabric to prepare to be joined while sewing.

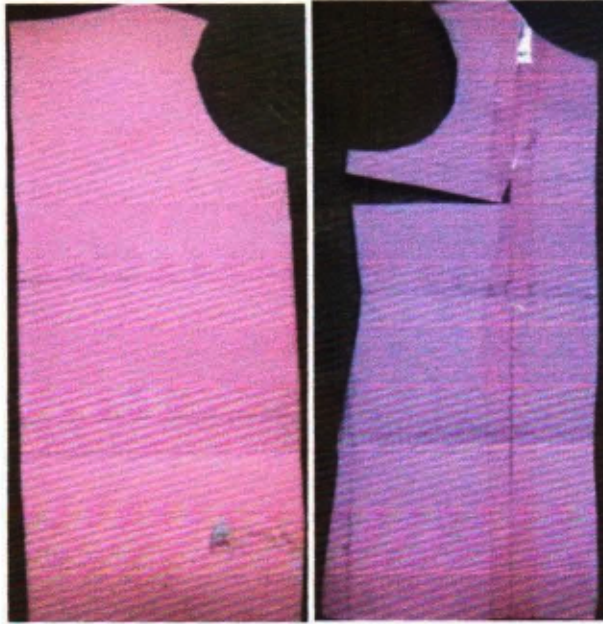


Figure 44: Patterns for the dress

Source: Photo by researcher

The pieces were sewn together, the apparel was completed ,finishing was done at the seams for neatness.



Figure 45: The apparel being sewn

Source: Photo by researcher



Figure 46: Finished apparel

Source: Photo by researcher

The apparel has a pleat at the front and is controlled by looped laces such that the wearer can let out as much as they need at a time. The back has a gore that is also controlled by looped laces and this was done to provide extra room when needed. The loops at the back are longer so as to maintain the shape of the dress as it expands.

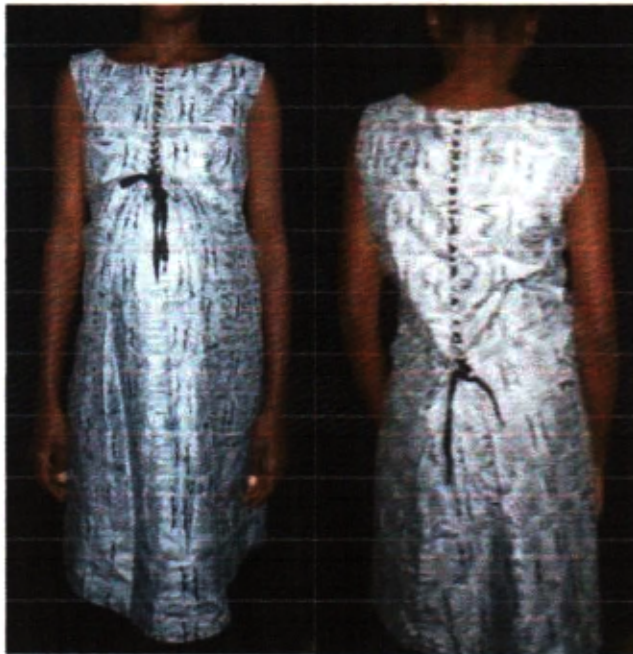


Figure 47: Apparel on a model

Source: Photo by researcher

Design 3: Pleat fit

The Hakama are a type of traditional Japanese clothing. Trousers were used by the Chinese imperial court in the Sui and Tang dynasties, and this style was adopted by the Japanese in the form of hakama beginning in the sixth century. Hakama have seven deep pleats, two on the back and five on the front. Although they appear balanced, the arrangement of the front pleats (three to the right, two to the left) is asymmetrical, and as such is an example of asymmetry in Japanese aesthetics. The Hakama are secured by four straps (himo), two longer himo attached on either side of the front of the apparel, and two shorter himo attached on either side of the rear. The rear of the apparel has a rigid trapezoidal section, called a koshi-ita. Below that on the inside is a hakama which is tucked into the himo at the rear and helps to keep the hakama in place (Yamanaka, Norio ,1982)..



Figure 48: Hakama skirt design

Source: <http://m.ebay.com/itm/Handwashable-Dark-Red-japanese-ANDON-HAKAMA-Skirt-type-B744-/>

The hakama skirt was drawn and the design developed into a final design.

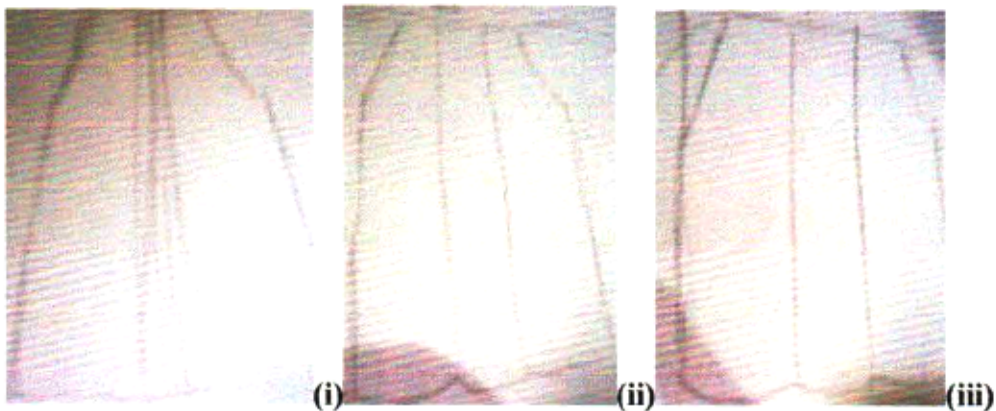
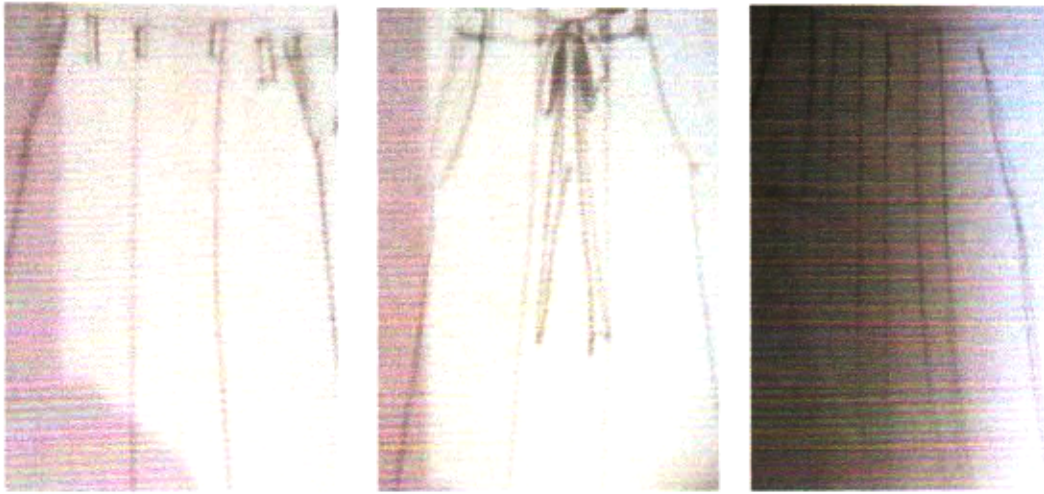


Figure 49: Developmental studies (i-iii)

Source: Photo by researcher



(iv)

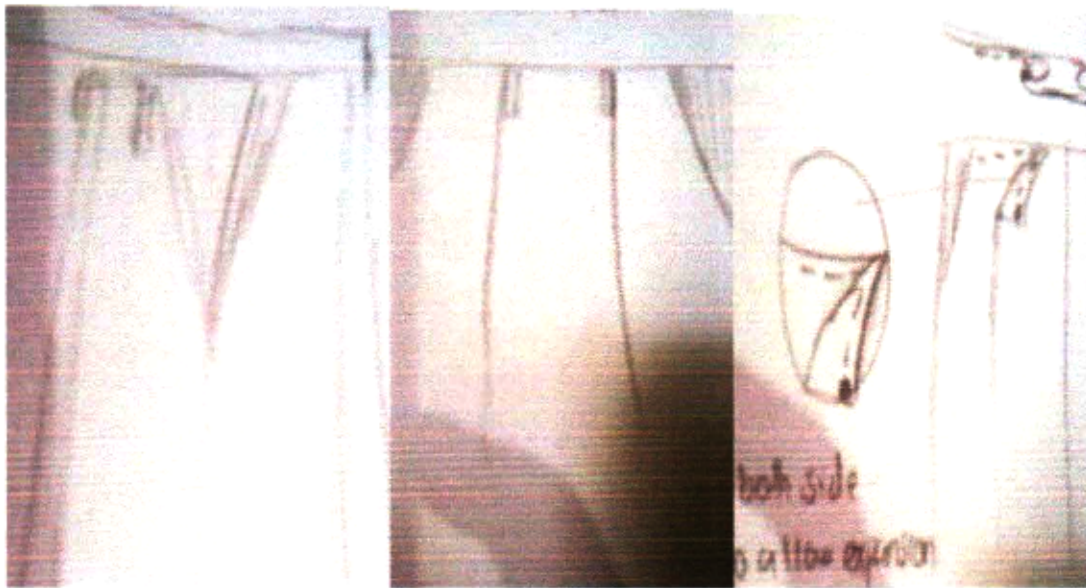
(v)

(vi)

Figure 50: Developmental studies (iv-vi)

Source: Photo by researcher

The option of the design with a stretch panel and belt loops to secure the skirt in place with buttons at the front and back to enable adjustments to be made to the skirt.



(vii)

(viii)

(ix)

Figure 51: Developmental studies (vii-ix)

Source: Photo by researcher



Figure 52: Final design (front and back)

Source: Photo by researcher

The pot called olutuha was chosen as a source of inspiration for the motif. The pot was customarily used by the Banyankole by elders for drinking a local brew called tonto. The pot was drawn and below is the process;



Figure 53: *Olutuha*

source: <http://ohiocraft.org/ocm-exhibitions/past/2014-2/in-touch-with-the-spirit/djenne-red-glaze-flask/>

Then the shape of the Buganda beer pot was used to inspire the designs on the fabrics and this is how it was developed.



Figure 54: outline of the pot

Source: Photo by researcher



Figure 55: Form of the pot

Source: Photo by researcher

All the repeat systems were used to create a variety of possibilities of the fabric designs and these include random repeat system, half drop, block pattern, mirrored, brick pattern and diamond repeat system.



Figure 56: Mirrored repeat pattern system

Source: Photo by researcher

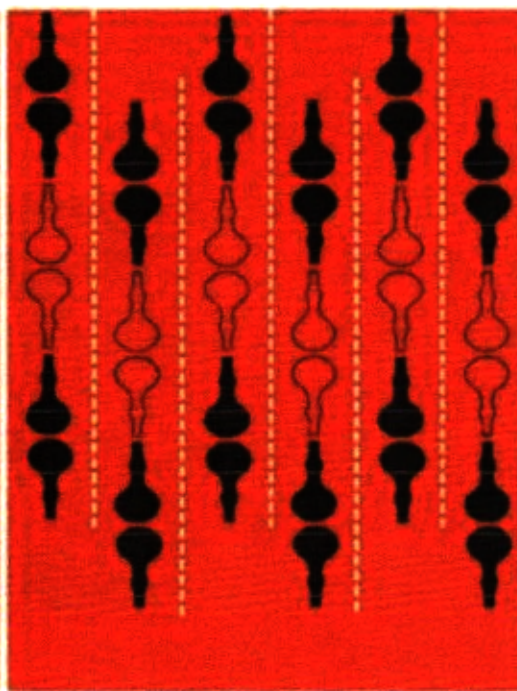


Figure 57: Half drop repeat system

Source: Photo by researcher

amples were made with dyed fabric and embroidery and screen printing to see how the techniques would look like on a fabric.

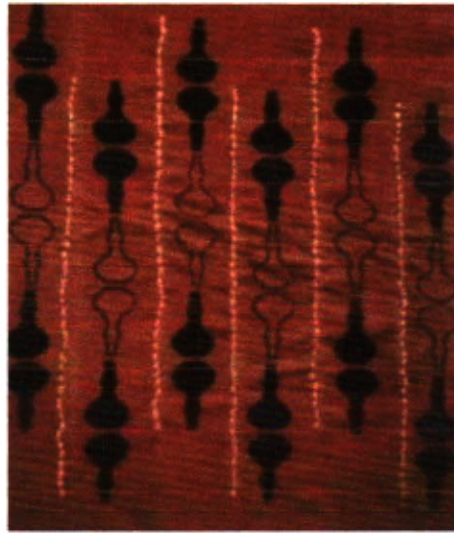


Figure 58: Sample of the designs on cloth

Source: Photo by researcher

Fabrics that were in the colour of bark cloth were purchased so as to avoid spending time and money on dyes and dyeing.

The fabrics were printed on with the lighter colour first and then the darker colour.

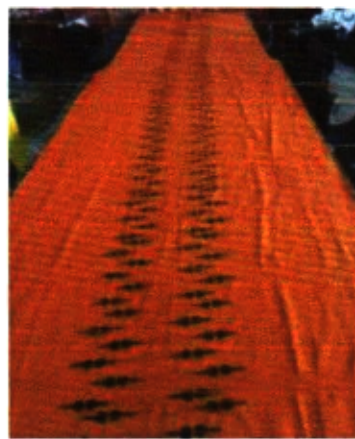


Figure 59: Screen printing process

Source: Photo by researcher



Figure 60: Embroidery process

Source: Photo by researcher

A zigzag stitch was used to embroider the fabric because its bold and complements the print.

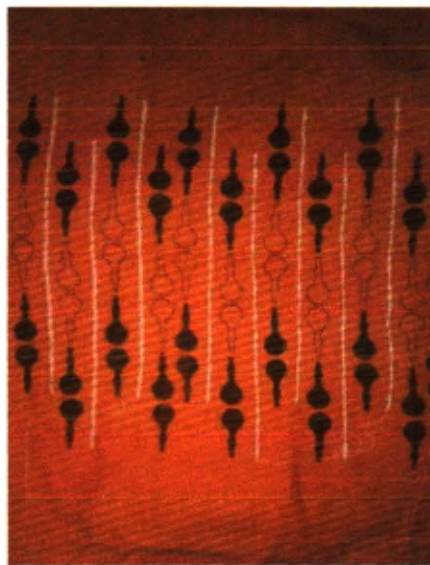


Figure 61: Final piece

Source: Photo by researcher

Patterns were drawn, traced onto the fabric and then cut.

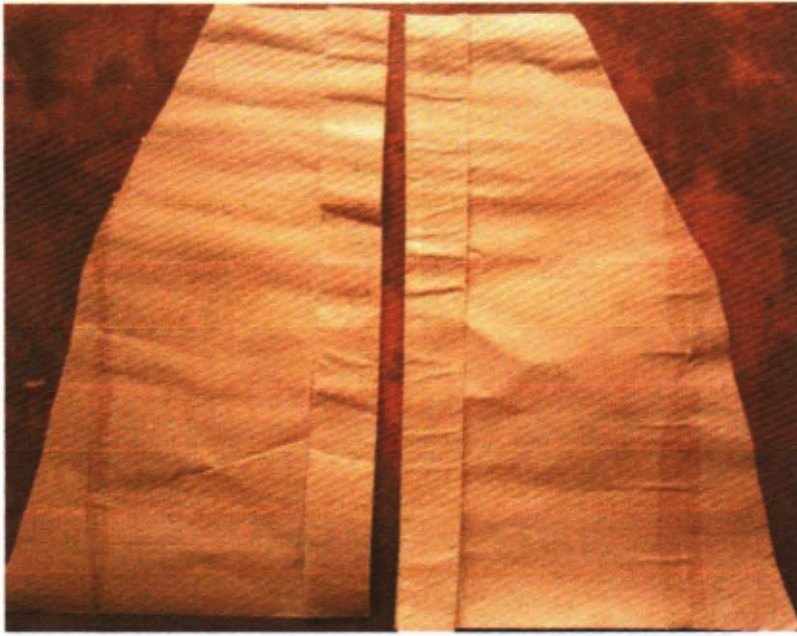


Figure 62: Patterns for the designs

Source: Photo by researcher

The draft patterns were traced onto the fabric which was then cut and sewn.



Figure 63: The apparel being sewn

Source: Photo by researcher



Figure 64: Final apparel

Source: Photo by researcher

The skirt has two pleats at the front and back, the pleat at the back conceals the adjustment mechanism which are three buttons that provide 6 inches at the waist. The skirt also has stretch panels on the sides for extra allowance. The belt is added to cover up the adjustment mechanism.



Figure 65: Apparel on the model

Source: Photo by researcher

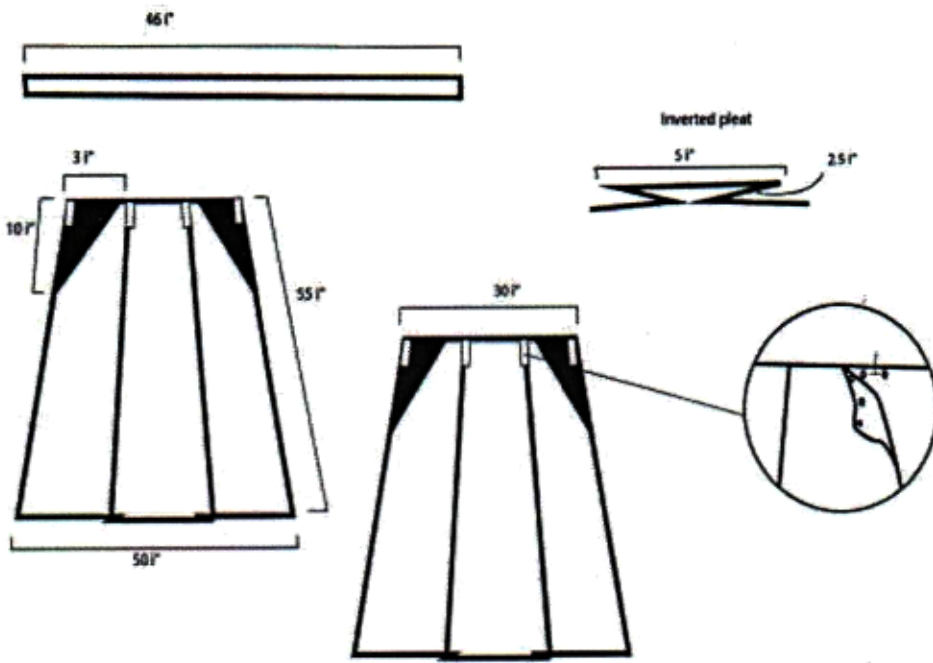


Figure 66: Scaled image of pleat fit

Source: Photo by researcher

Design 4: Slit shift

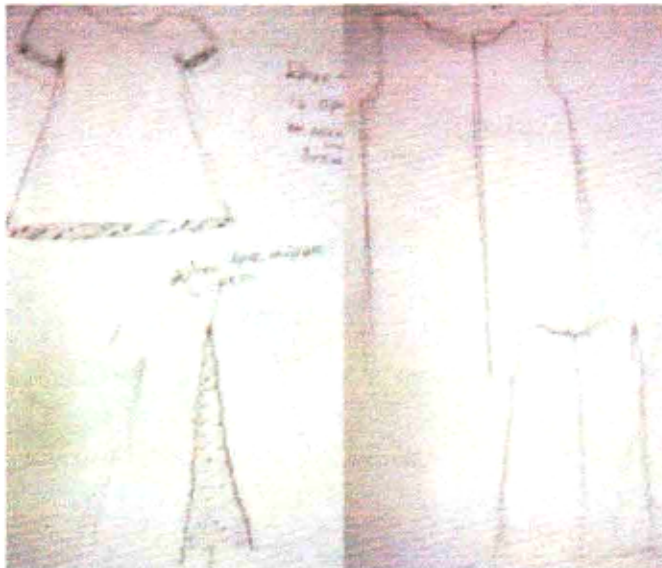
The inspiration for design 4 just like design 2, is the shift dress. The shift dress was chosen it was one of the most favored styles according to the findings. The researcher chose to redesign the shift dress by making adjustable using pleats and gores.



Figure 67: Shift dress design

Source: <https://www.leaf.tv/articles/what-is-a-shift-dress/>

Developmental designs were made to see the various possibilities of the designs.



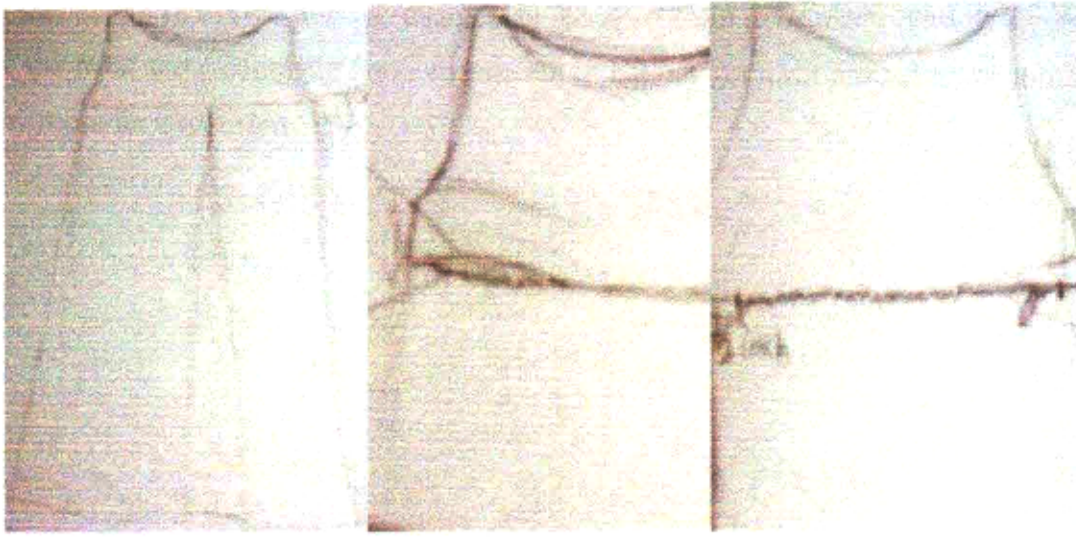
(i)

(ii)

Figure 68: Developmental studies (i & ii)

Source: Photo by researcher

A dress with a yoke in the middle of the bust area so as to create a space for nursing.



(ii)

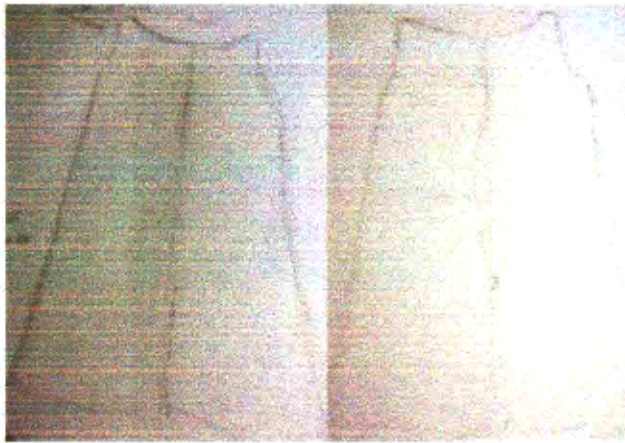
(iv)

(v)

Figure 69: Developmental studies (iii -v)

Source: Photo by researcher

The dress has an open seam at the front so as to allow for the growing tummy to expand.



(vi)

(vii)

Figure 70: Developmental studies (vi & vii)

Source: Photo by researcher

A flap was put all round the dress so as to cover the open seam at the front. This design has got a flap at the front and a complete dress underneath it that has got a slit around the abdominal area to allow room for expansion.

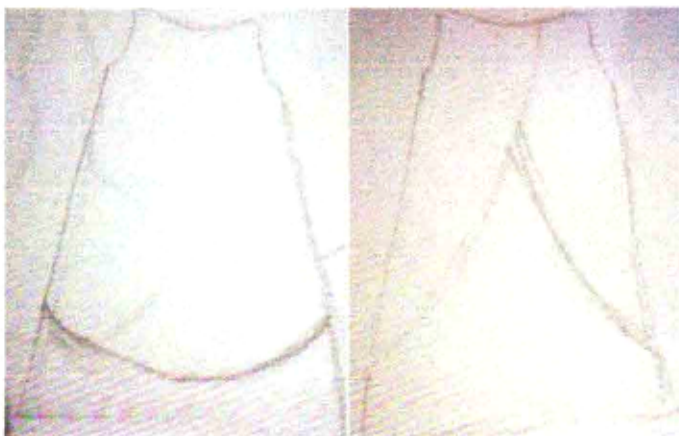


Figure 71: Final design

Source: Photo by researcher

The researcher used the Ankole pot called “Olutuha” for this fabric design as a source of inspiration.



Figure 72: Inspiration-*Olutuha*

Source: <http://ohiocraft.org/ocm-exhibitions/past/2014-2/in-touch-with-the-spirit/djenne-red-glaze-flask/>

Then the shape of the pot was used to inspire the designs on the fabrics and this is how it was developed.

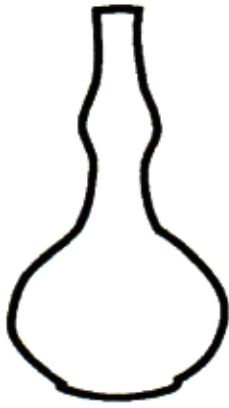


Figure 73: Negative of the pot

Source:Photo by researcher



Figure74: Positive of the pot

Source: Photo by researcher

A random repeat pattern system was chosen for this design. The positive and negative shapes of the pot were used for this design along with varying colors.



Figure 75: Computer design of fabric pattern

Source: Photo by researcher

The screen printing was done using two colors and 3 screens were used for the varying colors and designs respectively.

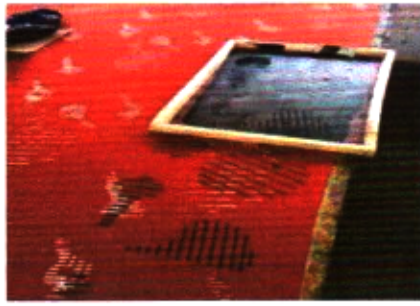


Figure 76: Screen printing process

Source: Photo by researcher



Figure 77: printed fabric

Source: Photo by researcher

Embroidery was applied on the fabric to add to it's aesthetic value.



Figure 78: Embroidery process

Source:Photo by researcher



Figure 79: Final product

Source: Photo by researcher

The patterns for the final design were drafted and cut out.

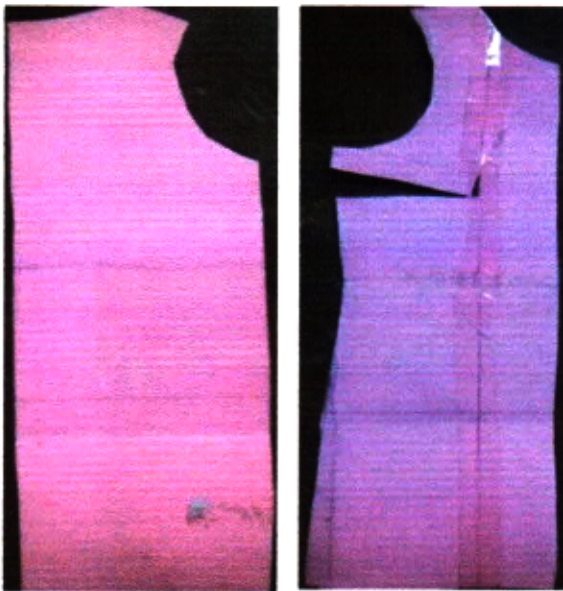


Figure 80: Pattern drafts for the design

Source: Photo by researcher

The patterns were traced onto the fabric, cut and sewn together.



Figure 81: The apparel being sewn

Source: Photo by researcher



Figure 82: the finished apparel

Source: Photo by researcher

The apparel is a shift style dress that has two pieces to it, the dress has a slit at the front from just below the bust to the lower abdominal area so as the tummy grows it can protrude through the slit. The bodice piece is a flat to cover up the tummy as it expands.



Figure 83: Apparel on a model

Source: Photo by researcher

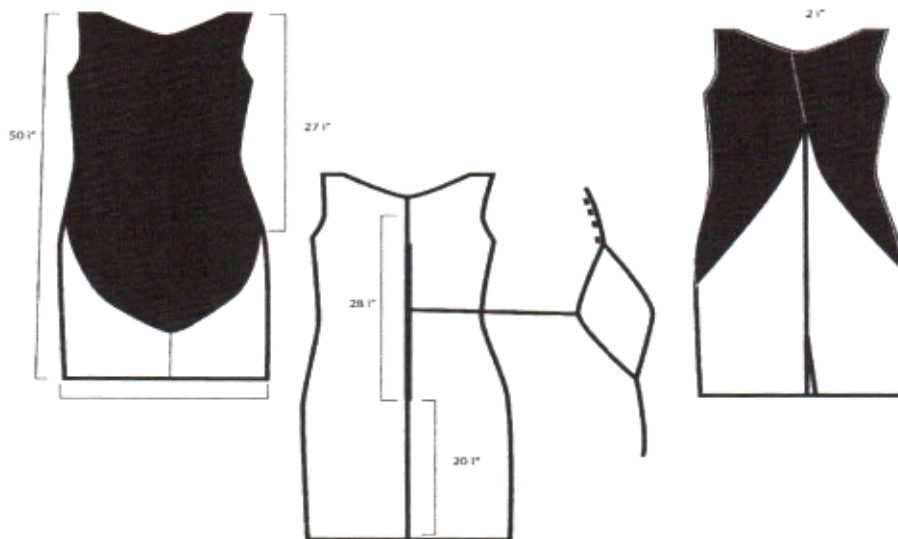


Figure 84: Apparel on a model

Source: Photo by researcher

Design 5: Kite height

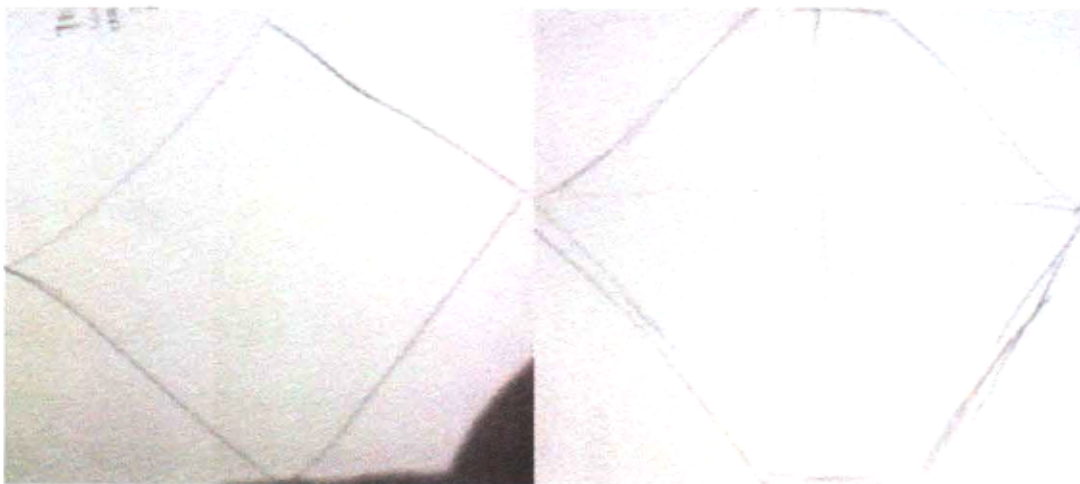
According to Eden Maxwell, a kite is traditionally a tethered, heavier than air craft with wing surfaces that react against the air to create lift and drag. A kite consists of wings, tethers, pulleys, and anchors. Kites often have a bridle to guide the face of the kite at the correct angle so the wind can lift it. The kite shape was chosen because it's wide in the side which creates an accommodative design to provide space for the expanding belly.



Figure 85: Kite shape

Source: Photo by researcher

The top and bottom edges to create straight surfaces at the top and bottom.



(i)

(ii)

Figure 86: Developmental studies (i & ii)

Source: Photo by researcher



Figure 87: Front and back when open

Source: Photo by researcher

The dress has buttons on one side of the edges of the dress and button holes to allow for adjustment.

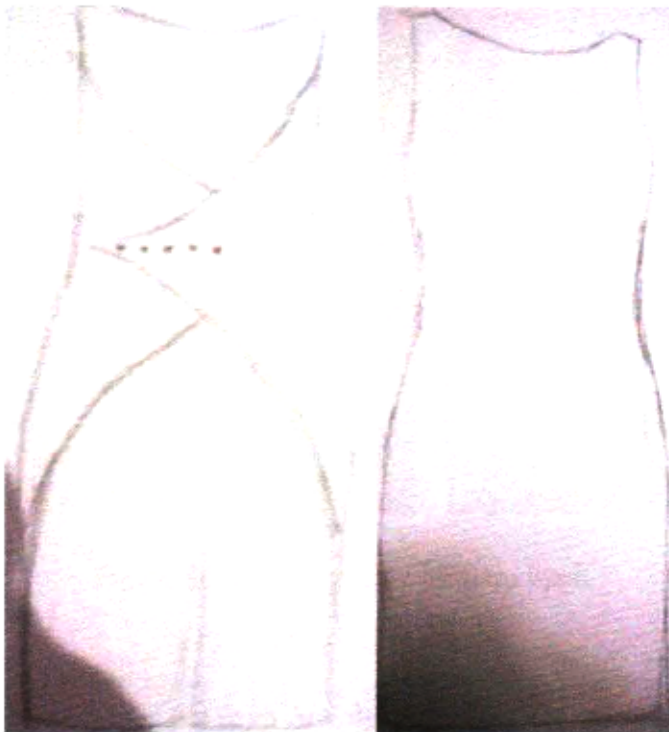


Figure 88: Front and back when closed

Source: Photo by researcher

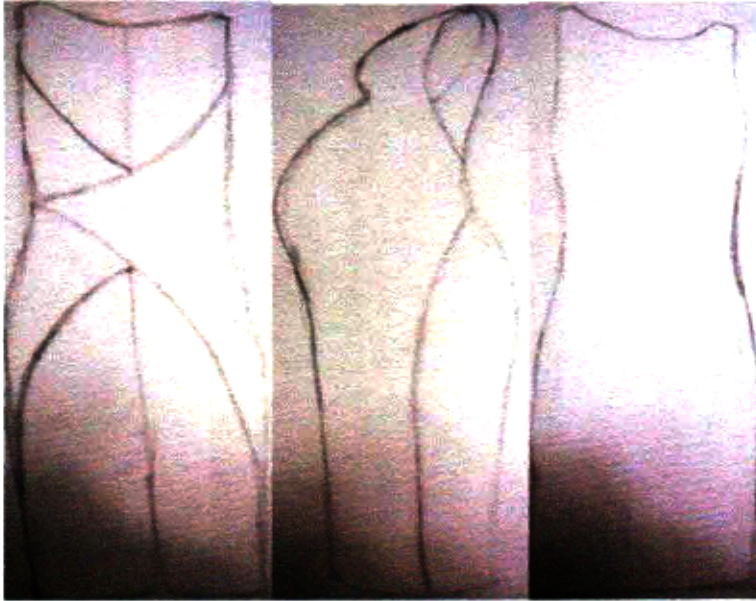


Figure 89: Final design

Source: Photo by researcher

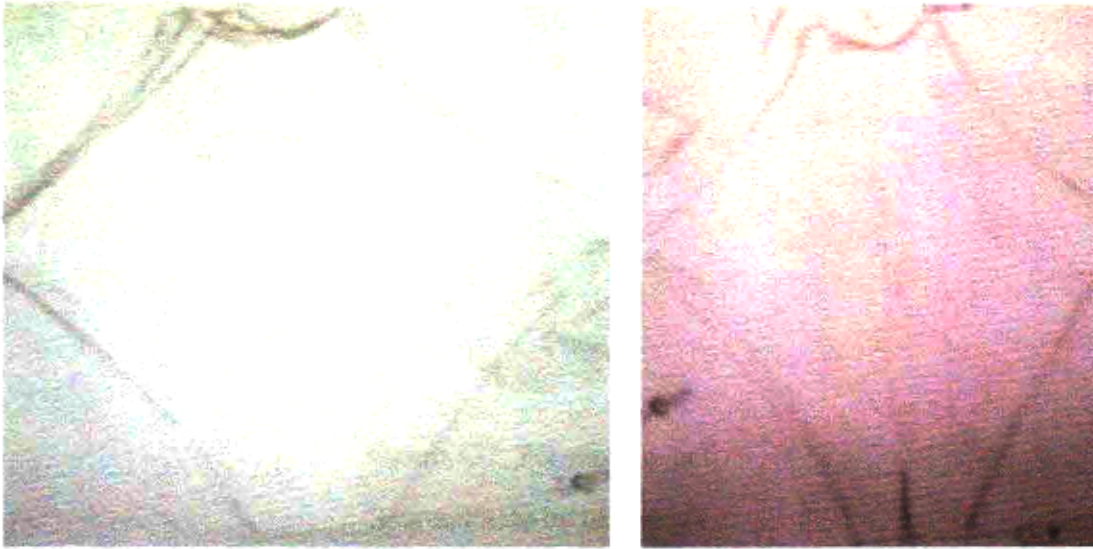


Figure 90: Dress design with flaps open

Source: Photo by researcher

For this fabric design, the Olutuha pot from Ankole was used as a source of inspiration. The basic shape of the pot was used and manipulated to create a repeat pattern for the fabric.



Figure 91: Inspiration-*Olutuha*

Source: <http://ohiocraft.org/ocm-exhibitions/past/2014-2/in-touch-with-the-spirit/djenne-red-glaze-flask/>



Figure 332: Form of the pot

Source: Photo by researcher

The pot shape was used to create a motif. A block type of repeat system was used for this fabric design.

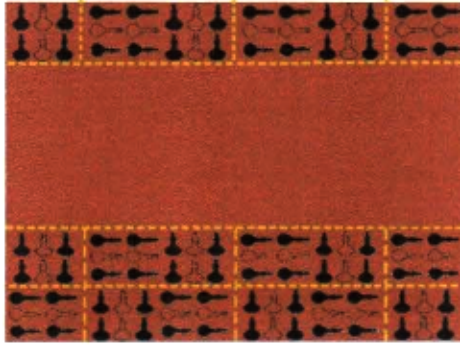


Figure 93: Computer design of fabric

Source: Photo by researcher

Screens and fabrics were prepared for printing and the printing process was started. Black paste was chosen so as to contrast with the background colour. The paste was applied to the fabric and then allowed to dry.

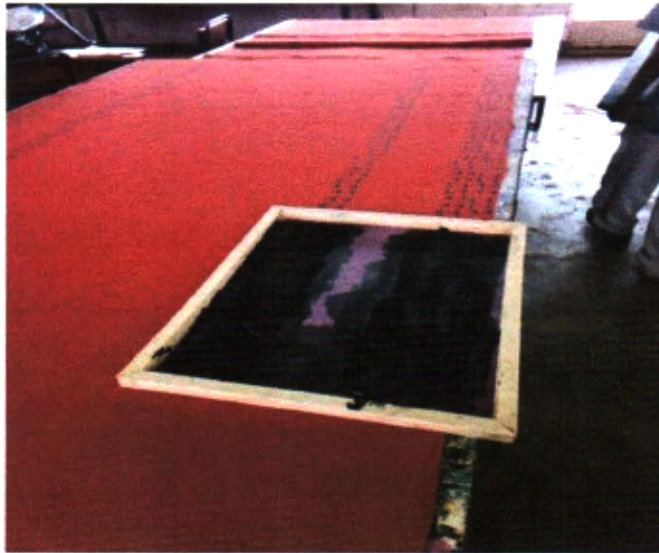


Figure 94: Screen printing

Source: Photo by researcher

The fabric was embroidered using a machine to add to the aesthetic value and uniqueness to it.



Figure 95: Embroidery

Source: Photo by researcher



Figure 96: Final product

Source: Photo by researcher

The repetitive patterns were drafted and then cut out.

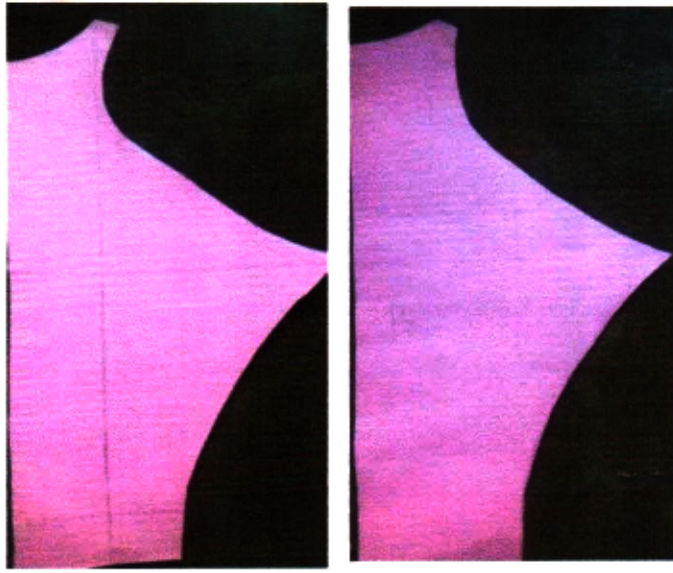


Figure 97: Pattern drafts for the design

Source: Photo by researcher



Figure 98: Apparel being sewn

Source: Photo by researcher



Figure 99: Finished dress (front and back)

Source: Photo by researcher

The apparel takes up the kite shape where by it has flaps that fold up at the back and are controlled by snap buttons to allow the wearer take out as much a they need at a time. The flaps overlap at the back to maintain the overall shape of the dress.

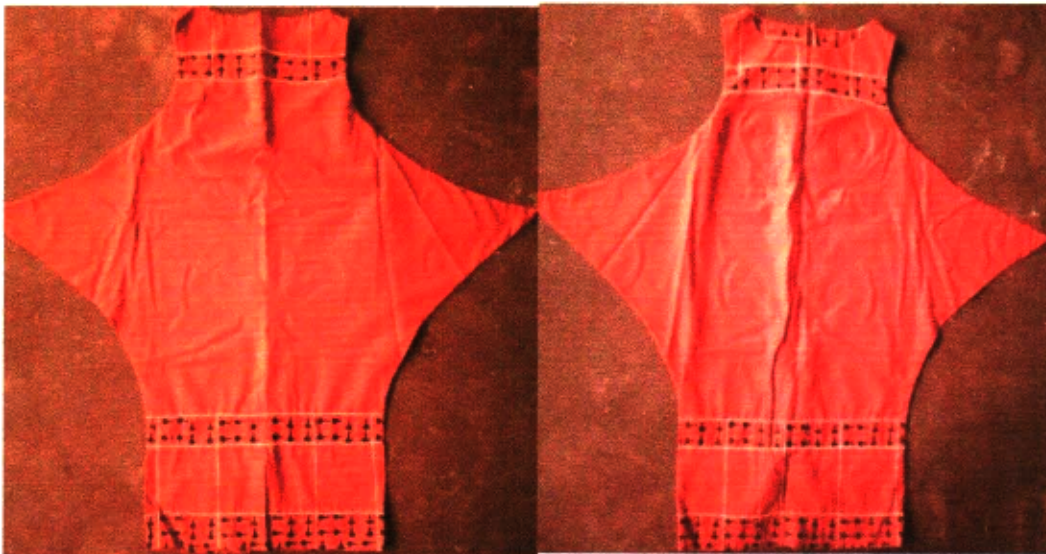


Figure 100: Dress when open (front and back)

Source: Photo by researcher



Figure 101: Apparel on a model

Source: Photo by researcher

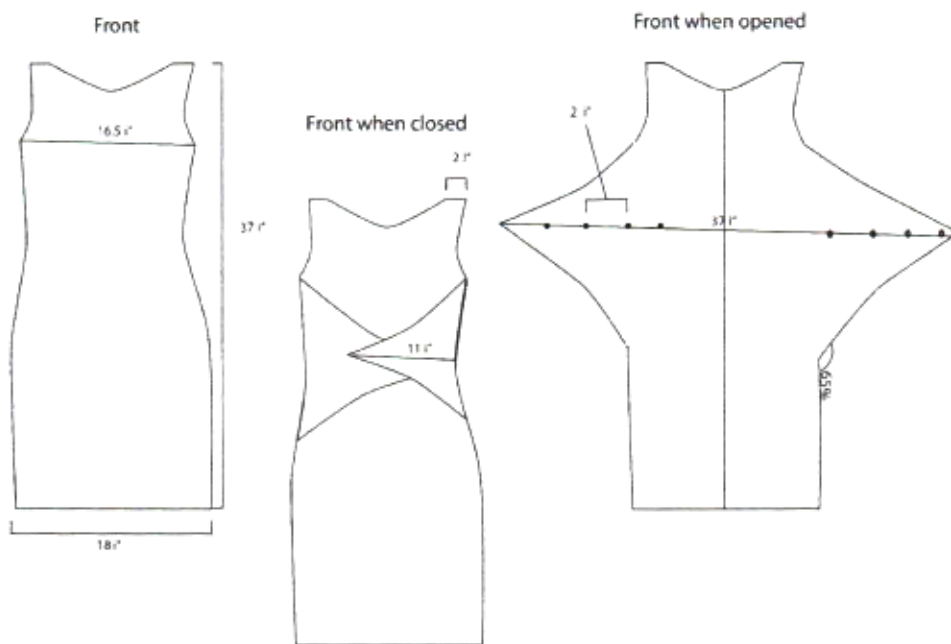


Figure 102: Scaled image of kite height

Source: Photo by researcher

CHAPTER FIVE:SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Overview

This chapter presents a summary of the findings, conclusions and recommendations of the study. The information was presented following the objectives of the study. The findings are based on the outcomes obtained from the interviews, observations and studio experiments.

5.2 Summary

In the study carried out amongst women concerning maternity apparels, it was found that the use of maternity apparels was important for pregnant women. Responses were taken from the questionnaires answered by working women both pregnant and not. There were a number of findings made;

There are many styles of maternity apparels worn by pregnant women and they include; empire waist, A-line, maternity trousers and skirts, layering and decorated necklines. However the most common styles worn were A-line and layering that came up at 40% (20) each.

The desirable features for maternity apparels were more room (54%) especially at the abdominal area and fasteners (50%) for adjustment of the outstanding features.

The perceptions women have towards maternity apparels pose a challenge as finding work appropriate maternity apparels and these include; the clothes being too expensive, could only be worn during pregnancy, some of them are not fashionable and are overly decorated which is not work appropriate.

It was realised also realised that when selecting maternity apparel comfort (50%) and fit were the most important factors that were considered.

From the observations made, the researcher was able to come up with possible designs for adjustable maternity apparels. The designs were derived from already existing designs and putting adjustable provisions because the researcher had wanted to create apparels that didn't look like the typical maternity apparel. Five pieces were made using various methods in order to allow expansion and these included the use of buttons, strings, volume of the fabric, pleats and

innovative use of the fabric. The fabrics used designed using several African pots as a source of inspiration. The pottery was chosen because the researcher wanted to create authentic African designs. The respective pots were developed into motifs that were replicated to produce fabrics suitable for the production of adjustable maternity apparels.

5.3 Conclusion

Pregnant women working in banks around Kampala want to put on apparels which are affordable, comfortable and fashionable during pregnancy. Most women prefer layering and A-line style apparel. The pregnant women also need clothes that they can be used throughout the pregnancy and after delivery. Adjustable maternity apparels were designed and produced and they could be use by both pregnant and not pregnant women.. Some of the apparels worked and proved to be functional throughout different stages of the pregnancy and others worked only for a limited time only, for example the kite height design worked well for the growing belly but the chest and the bust area got tight which was a short fall in the design.

5.4 Recommendations

Number of adjustment mechanisms such as zippers, hooks, ribbons, strips and other innovative design features like detachable pieces and so on can be used to make adjustable maternity apparels.

Further studies should be done in line with design to provide more adjustable designs that are well able to withstand the changes a pregnant woman goes through especially at the bust and belly area.

There is need to use other methods of fabric decoration like applique, beading and so much more other than using machine embroidery and screen printing decorative techniques to enhance the aesthetic value of the apparel.

The government should revive the textile industries so as to support the local talent and also provide jobs for the locals and this will also help the nation reach the middle income status its aiming at.

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Appendix

Questionnaire for pregnant women and other women.

I am Nangyeshe Brenda a student of Kyambogo University doing masters in Industrial fine Art. I am carrying out a research to design adjustable maternity apparels for working pregnant women in Kampala. The intention of this study is to find out what features pregnant women look for in a apparel meant for work and find out if pregnant women are still interested in fashionable clothing despite their ever changing bodies. I therefore kindly request you to answer the following questions.

1. Age: 20-30 30-40 40-50

2. Are you pregnant?

b) If yes how far along are you?

3. Do you have you do you plan to wear maternity clothing?

Yes No

b) If no, please give reasons why?

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.....

4. With all the physical and psychological changes one goes through one would think the element of being fashionable would take the back seat for whatever is comfortable. Are you mindful of what you put on as you to work?

Yes No

b) If so please mention why.

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5. What are your perceptions towards maternity apparels?

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6. Do you easily get work appropriate maternity clothing?

Yes No

7. Are you comfortable with the maternity apparels available on the market?

Yes No

8. Which are most favorable styles for you, especially for the work environment?

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9. Have you found any problem with the maternity clothing you get for work?

Yes No

b) If so please mention them,

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.....

10. What do you look for in a work maternity apparel?

Comfort

Fit

Material

Trend

Particular style

work appropriateness

b) Any details if possible,

.....
.....

11. What features would you suggest to be improved or added to the maternity clothing design?

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12. Would you like to use your maternity dress after delivery

Yes No

13. What do you use your maternity dresses for after delivering?

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