



ADRRI JOURNALS ([www.adrri.org](http://www.adrri.org))

E-ISSN: 2343-6891 VOL. 16, No. 5 (4), January, 2019

## **Assessing the Standard of Garment Design Processes among Garment Producers in Sekondi – Takoradi**

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Available Online: 31<sup>st</sup> January, 2019

URL: <https://www.journals.adrri.org/>

[Cite article as: Bigson, K., Awuyah, I. K. and Nyante, B. (2019). **Assessing the Standard of Garment Design Processes among Garment Producers in Sekondi – Takoradi**. ADRRI Journal of Arts and Social Sciences, Ghana: Vol. 16, No.5 (4), Pp.1-16, E-ISSN: 2343-6891, 31<sup>st</sup> January, 2019.]

### **Abstract**

There are many garment producers in Sekondi-Takoradi, most often the product of these garment producers cannot compete with imported clothes in the Ghanaian market. This is as a result of low standard of garment design processes used by artisans in the production of garments. The research was to identify methods used by garment producers in making clothes and to investigate how clothing skills are developed among garment producers in Sekondi –Takoradi. The study also seeks to identify the technology used by the garment producers in the production of garments. The study employed descriptive survey method of research. Purposive sampling was used to select thirty (30) garment producers comprising twenty (20) females and ten (10) males who are actively involved in garment construction. Structural questionnaire was designed and used to collect data from respondents. The data was analyzed using basic frequency counts and percentage tables. The study revealed that ‘free-hand cutting’ is the most popular method used by majority of the respondents. It also came to light that most garment producers acquired their skills through practical demonstration and had an average training of three years through formal and informal education. It was revealed that most garments produced in the

Metropolis were below standard because garment design processes were not properly adhered to. It is recommended that the association of garment producers in the Sekondi – Takoradi Metropolis and the Ghana Standards Authority should outline some criteria for checking the quality of garment produced by artisans to meet international standards.

**Keywords:** standard, garment design processes, garment producers, Sekondi - Takoradi, quality

## INTRODUCTION

Throughout recorded history, clothing alongside food and shelter has been one of the primary needs of mankind. It is therefore obvious that clothing is an inevitable need of humanity. Clothes serve as body coverings and a way of protecting oneself. Clothing in general has gone through a lot of changes from animal skin draped over the body as wrapper during the 'Early man Age' to recent psychedelic designs and styles. A garment gives a figure a pleasant appearance if well-tailored and when the style suits the wearer (Campbell et al, 1973). It is a fact that acquisition of dress sense promotes a pleasing appearance and a well-dressed person looks confident, poised, happy, healthy and relaxed (Carr and Pomeroy, 1992). For this reason, it becomes very important that care is taken when going through the design processes of garment construction for good quality apparel. In recent times clothing construction has become popular among men and women all striving to create unique designs. This interest in clothing construction is important when one considers the worth, quality and quantity of garments being produced daily. Garment producers may be internationally known personalities, each with his or her own particular style catering for the world. According to Ervin and Kinchen (1974), they can also be individuals with a flair or feeling for fashion who gain pleasure and creative satisfaction from putting their own ideas into practice by adapting and making clothes for themselves, their family and friends.

Garment construction in Ghana, especially in Sekondi-Takoradi, can be categorised when one talks about quality and quantity. There are three distinct classes of garment producers in the 'Twin City'. These are

- i) The top class garment producers who identify themselves with names like 'London trained', 'American trained' and 'Paris trained'. They are the tradesmen and women who had the opportunity of acquiring the skills of sewing outside Ghana. They therefore take pride in the countries they were trained in and take on the names of those countries or cities.

- ii) The middle class garment producers are those who received their training in well-established vocational institutions and after training, went into full apprenticeship and set up their own shops.
- iii) The low class group who went through formal apprenticeship but was unable to establish themselves due to financial constraints or failed to have the full apprenticeship training. They mostly engage in remodeling of garments and the production of some casual wear.

These different categories of garment producers design and make garments of different qualities. They have varied skills and as such some produce very expensive and exclusive fashionable garments while others produce for people who cannot afford expensive prices. In Sekondi-Takoradi, you can find these garment producers in shops, kiosks and markets. The low class group dominates in the construction of garments in the Metropolis. Though different categories of clothing producers with varied skills and experience operate in Sekondi-Takoradi, the garments they produce do not measure up to international standards. As a result, a lot of the people prefer purchasing imported clothes, especially bridal and children's wear to locally produced garments even though the imported garments are comparatively expensive. The workmanship and fit for imported clothes provide immense satisfaction to the buyers. It will therefore be worthwhile to evaluate the quality of garment produced by local garment producers and suggest ways of improving their skills in order to compare with imported clothes to promote sales and expand production. The industries cannot expand to any appreciable international standard if measures are not taken to ensure quality of garment produced into the Ghanaian market.

The clothing industry in Ghana, especially in Sekondi-Takoradi has been on small scale production. Most garment producers cannot produce quality clothes to meet international standards. It is hoped that this study will serve as the basis for developing such a system.

The objectives of the study were;

1. To identify methods used by garment producers to make clothes from fabrics
2. To investigate how clothing skills are developed among garment producers
3. To find out the technology that is being applied by the garment producers and
4. Suggest ways of enhancing their sewing skills in order to produce quality garments

#### ***Research Question***

1. Which garment design processes (methods) are used by garment producers in the construction of quality garments?

2. How are clothing skills developed among garment producers in Sekondi – Takoradi?
3. How is technology used in the production of quality garments?

### ***Sekondi- Takoradi (The Study Area)***

The Sekondi Takoradi Metropolitan forms part of twenty three (23) Metropolitan, Municipalities and Districts in the Western Region of Ghana. According to ghanadistricts.com, the Administrative Capital of the Metropolitan is Sekondi-Takoradi. Sekondi-Takoradi Metropolis is located at the south-eastern part of the Western Region. This makes it the smallest, but easily the most highly developed. It is located on the coast, about 200km west of Accra. Indeed, it is the third largest Metropolis in the whole of Ghana. The Metropolis houses the Takoradi Technical University which prides itself as the hub of technical education in the Western Region. The Metropolis is bordered to the west by Ahanta West Municipal and to the east by Shama District. At the south of the Metropolis is the Atlantic Ocean and at the northern part is Wassa East District. The population of the Metropolis according to 2010 population and housing census stands at 559,548 with 273,436 males and 286,112 females. The Metropolis can boast of artisans (including garment producers), farmers, educationists, businessmen, fishermen and a host of others.

### ***Quality of Garment***

Quality according to Chambers 21<sup>st</sup> Century Dictionary is the degree or extent of excellence. The acquisition of quality clothes is very important. Carr and Pomeroy (1992), in a discussion of quality clothes states that quality and reliability in clothing depend on factors such as stitch density, seam turning, seam strength and amount of elasticity. They continue to explain that in quality control language these are referred to as variables. What they mean is that they are items which can be measured to some extent within the normal meaning of that term. This implies that a standard is set to inspect them, but generally speaking, especially in areas where fashion plays an important role, quality is concerned with attributes. According to Carr and Latgam (1994) quality of garment is essential not only at the finishing stage or inspection of garment but also during every stage of the sewing. They emphasized that quality at the designing stage, cutting stage; fusing and sewing stage should not be taken for granted. Campell, et al (1973) have also enumerated a number of areas one may look out for and questions one may ask when assessing quality in garment construction these are: grain of fabric, fabric design and placement, seams, zippers, buttons, buttonholes, hems, skirt lining, jacket or coat lining, labels. James (1987) also expressed his view about quality and cited that fitting skills are as important as sewing skills for creating garment of quality, value and beauty. In his book 'the perfect fit' (page 13), he enumerated some

areas of fit, these include the neckline, shoulder, seams, sleeves, sleeve hem, bust shaping, bodice back, waistline seam, back darts, seat and hemline. Meanwhile, according to Mansfield (1953), quality must be ensured during the designing stage, cutting-out stage, fusing stage, fitting of garment, and pressing stage. Quality therefore is said to be manufactured into a garment and not inspected into it.

### ***Methods used in garment construction***

There are many methods of producing garments; these include Haute Couture, Bespoke, Custom Sewing, Mass Production/ Commercial Sewing, 'Free-Hand' Cutting, Draping, Drafting, and Commercial Pattern. According to Encyclopedia of World Costume (1992), *Couture* is a French word for sewing. Hones (1990) also opines that the term Haute Couture means exclusive custom-made fashion by top designers. Haute couture is very expensive, very exclusive and copied for everyday fashion.

*Bespoke* tailoring produce tailored clothes predominately for men. According to Dictionary of Costume (1988), in *Bespoke* tailoring, the measurement of clients is taken and a dress made to fit only the client.

According to Campbell, et al (1973) not all garment are mass produced but some clothing can be produced by clothing shops or by custom sewers. In Ghana most garments worn by family members are made by custom sewers. Atobrah (1998) added that commercial sewing started in the mid-nineteenth century and the introduction of the sewing machine helped this industry to develop. The invention of the sewing machine saved the long hours and energy used in sewing by homemakers and accelerated mass production.

Galvin (1978) defines '*free-hand*' cutting as a method of cutting a garment directly from fabric using measurement as a guide, but without necessarily producing a paper pattern. This is good method when time is an important factor and when commercial patterns are not available on regular basis for popular fashions. Ghana Home Economic Association, GHEA (1990) also describes 'freehand' cutting as a method of cutting a garment directly from fabric using measurement as a guide. 'Free-hand' cutting is mostly preferred by garment producers are acquired skills through informal training during their apprenticeship.

*Draping* is an artistic approach in which a fabric such as muslin is used to cover and fitted to the curves of the human figure to make a cloth pattern (GHEA, 1990). With this method, the dressmaker can see what the garment will look like as the pattern takes shapes and give opportunity to the dressmaker to create and develop her own style (Bull, 1979).

According to Cooklin (1991) *commercial pattern* are paper patterns designed of different style and one has to choose the size and the style that will suit the figure. This method is rarely used by garment producers in the study area.

In Ghana, most men sewers or 'tailors' as they are locally known specialize in men's wear, except few of them who specialize in women's wear. Women, who usually specialize in women's wear, are referred to as 'seamstresses'. In Sekondi-Takoradi, garment producers work in cooperate body (associations) or work on their own.

### ***Development of Skills in Garment Production***

According to Betts (1973), garment construction skills are mainly acquired by imitation and practice. Naturally the only way a trainee can imitate an operation is to watch a practical demonstration and to be provided with facilities to practice what he has observed. Fleck (1971) also opines that the vital stage of acquiring skills is reached when practice begins, continual practice is essential together with assistance from the trainer who should regularly check and correct when necessary. Chuter (1995) emphasis that in developing skills demonstration is very vital since it helps the trainer to show how to produce garment at speed but it is necessary to stop to cover key points. The trainee can then tackle the job, doing one cycle, then several and after that for longer periods.

### ***Garment Production Technology***

Technology is the process by which designers put their ideas into operation. According to Chambers 21<sup>st</sup> Century Dictionary, technology is the practical use of scientific knowledge in industry and everyday life.

Cooklin (1997) also defines technology as a technical method of achieving a practical purpose, but its original Greek root meaning is the systematic treatment of an art. This later meaning is appropriate for the clothing industry because garment design in a goal oriented task a form which requires technology to convert into a finished product. Carr and Pomeroy (1992) also concluded that the technology of clothing is to integrate the parts of technology to originate extend or adapt garment style which completes effectively in the marketing of clothes. Technology in clothing construction is how designing, cutting, sewing, fusing and pressing are combined to produce a quality garment (Piest and Pullen, 1990).

## **METHODOLOGY**

The purpose of the study was to find out the processes used by garment producers to produce a garment and develop a simple instruction to serve as a guide for skill development in clothing construction. Sekondi/Takoradi was chosen as the study area

for the research because the researchers are familiar with some of the garment producers and accessibility of data was also considered. The 'Twin City' has a lot of garment producers who sometimes make garments for export.

The study employed descriptive survey method of research. Artisans (garment producers) from Sekondi/Takoradi constituted the targeted population for the study. Purposive sampling technique was used to select the appropriate respondents for the study (this served as the accessible population). The total sample size of the study was thirty (30). These are made up of twenty (20) female and ten (10) male garment producers who served as respondents for the study. These garment producers are actively involved in the designing, sewing, marketing and sales of garment in the Sekondi-Takoradi Metropolis.

The main instrument used for collecting data was structured questionnaire. The questions were based on the objectives of the study which sought to identify methods used by garment producers, to investigate how clothing skills are developed and to find out the technology being applied by garment producers and whether they are able to produce quality garments which meets international standard. Both open and close ended questions were used. Confidentiality of respondents was strictly adhered.

The instrument used for the study was pretested using six (6) garment producers from Winneba with the same characteristics as those used for the main study. The outcome of the pre-test helped the items to ensure validity and reliability of the instrument.

The questionnaires were distributed to the garment producers individually, and where necessary the researchers assisted the respondents to answer them. It was quite easy to administer since the questions were simple and did not demand highly confidential information. Frequency and percentage distribution tables were used to analyse the data and the information that could not be quantified was given qualitative interpretation. Relevant literature was used to support the findings in the discussions.

## **RESULTS AND DISCUSSIONS**

Structured questionnaire was used and this comprises both closed and opened ended questions. Respondents were allowed to choose from possible answers provided in the case of closed questions whilst they expressed their views in written forms to the open ended questions. The questionnaire was designed into twenty points which touched on various aspects of garment construction and quality of garments. The results of the findings are presented and discussed under the following headings: *Background of respondents, Development of dressmaking skills, Method used in garment construction, Technology used in garment construction, and the quality of garments.*

*Background of respondents***Table 1: Age Distribution of Respondents**

Age Range	Frequency	Percentage %
23-27	5	16.7
28-32	2	6.7
33-37	11	36.6
38-42	12	40.0
<b>TOTAL</b>	<b>30</b>	<b>100</b>

The age distribution of respondents is presented in Table 1. The data shows that twelve of the respondents representing 40 percent were aged between 38 and 42 whilst eleven, representing 36.6 percent were between the ages 33 and 37. Five of the respondents however, were between 23 and 27 years with the remaining two (6.7%) percent respondents aged between 28 and 32 years. From the data it is clear that majority of the respondents were mature people who had been in the trade for more than five years and thus had sufficient experience.

**Table 2: Distribution of Educational Background of respondents**

Educational Background	Frequency	Percentage %
MSLC	17	56.6
NVTI	2	6.7
GCE 'O'	3	10
GCE 'A'	1	3.3
DIPLOMA	1	3.3
POLYTECHNIC	4	13.3
NO FORMAL	2	6.7
<b>TOTAL</b>	<b>30</b>	<b>100</b>

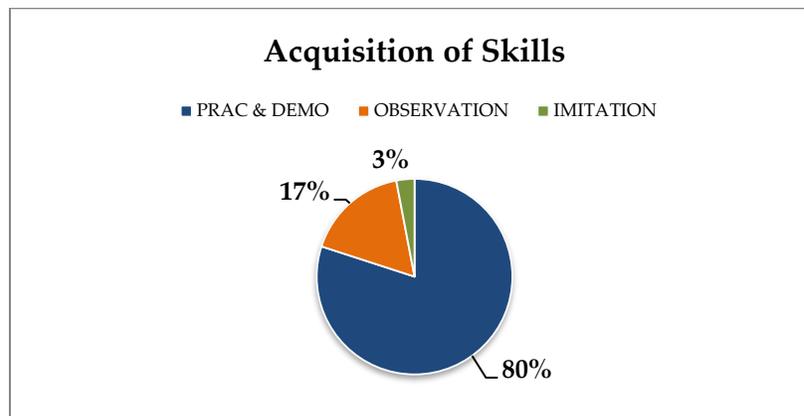
Table 2 above shows the educational background of the respondents. It clearly shows 56.7 percent were middle school leavers. Four (13.3%) were polytechnic graduate whilst GCE 'O' and NVIT holders were 10 percent and 6.7 percent respectively. One each of the respondents had GCE 'A' level or Diploma Certificate. Interestingly, none of the respondents interviewed had BECE or SHS certificate or first degree. From the results it can be said that a greater number of the respondents were Middle School Leavers. Though they sew well, majority of them could not interpret styles or design form books and catalogues. The public perception is that such people have low intelligence.

**Table 3: Distribution of Length of Training of Respondents**

Length of Training	Frequency	Percentage (%)
Six months	1	3.3
One year	1	3.3
Two years	9	30
Three years	12	40
Four years	3	10
Five years of more	4	13.4
<b>TOTAL</b>	<b>30</b>	<b>100</b>

The distribution of length of training of respondents is shown in Table 3 above. Twelve (12) of the respondents representing 40 percent trained for three years whilst those who trained for two years were nine representing 30 percent. Four of the respondents indicated that their training lasted for more than four years. This category of respondents explained that they were on attachment after their years of training. Three other (10%) said they trained for fours whilst the remaining two trained for either one year or six months. The study realized out that those who trained for six months and one year were the gifted type and needed some guidelines to enhance their skills.

#### *Development of dressmaking skills*

**Figure 1: Distribution of Acquisition of Skills of Respondents**

The above chart shows the distribution of how the respondents acquire their skill during training. Looking at the chart, it shows that 80 percent constituting the greater proportion of the respondents acquire their skill through practical demonstration. This means that their trainers demonstrated the skill and they were

made to practice it. While five (17%) of the respondents acquired their skill through observation and practice, one respondents (3%) indicated that she acquired her skill through imitation. Betts (1973), states that skills are mainly acquired by imitation and practice. Naturally, the only way a trainee, can imitate on operation is to watch a practical demonstration and to be provided with facilities to practice what has been seen. Chuter (1995) also opines that we learn a skill best by doing, next by seeing but worst by listening.

*Method used in garment construction*

**Table 4: Distribution of Method Used in Garment Construction**

<b>Methods Used In Garment Construction</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Drafting of pattern	5	16.7
Use of Commercial Pattern	3	10
Free hand cutting	17	56.6
Making specimen	5	16.7
<b>TOTAL</b>	<b>30</b>	<b>100</b>

Table 4 indicates the methods respondents used in garment construction. Out of the thirty respondents, 56.6 percent practice 'freehand cutting'. On the issue of drafting of pattern and making specimen, five (16.7%) each of the respondents selected these variables whilst three (10%) indicate they used commercial patterns. Armstrong (1987), argues that it is the best way of making quality garment for production.

From results in Table 4, majority of the respondents used 'free hand' cutting. As compared to other methods used in garment construction, freehand cutting is simpler and straight forward but when a mistake is made the fabric is wasted, GHEA (1990).

In addition to this, it is not a suitable method for beginners. Since majority of the respondents were over 33 years, it could be deduced that they were experienced dressmakers who have used the method over a long period.

However, Galvin (1978) argues that freehand cutting tends to be simpler and straighter forward than drafting, since it does not involve the drafting of a basic pattern and pattern adaptation.

*Technology used in garment construction***Table 5: Distribution of How Respondents Obtained Designs**

<b>How Designs Are Obtained</b>	<b>Frequency</b>	<b>Percentage %</b>
Create own design	17	56.6
Client suggestion	3	10
From catalogue	5	16.7
Fashion show	3	10
Magazine	2	6.7
<b>TOTAL</b>	<b>30</b>	<b>100</b>

The data in Table 5 above indicates the distribution of how designs are obtained for garments production. Out of the 30 respondents, 17 constituting 56.6 percent of the respondents said they created their own designs. Five (5) representing 16.7 percent states that they obtained their design from catalogues whereas three (10%) each claimed that they depend on clients suggestions and from fashion shows. Two (6.7%) others said they obtained their designs from magazines.

The data indicates that most garment producers in Sekondi-Takoradi created their own designs for their clients. Contrary to Hones (1990), there are four main centres for fashion. These centres are Paris, London, New York and Milan. In these countries top designers make two collections of garment each year. These designs are modelled to the press and public and throughout the year these shall be the fashion for the year. Most garment producers in the Sekondi - Takoradi do not attend international fashion shows to obtain these designs neither do they attend local shows, therefore they cannot produce to meet international standard.

**Table 6: Distribution of the Types of Machines used by Respondents in Garment Construction**

<b>Type of Machine</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Neatening Machine	6	20
Button Hole Machine	5	16.7
Overlock Machine	2	6.7
Embroidery Machine	1	3.3
Electric Sewing Machine	8	26.7

Hand Sewing Machine	7	23.3
All the above machines	1	3.3
<b>TOTAL</b>	<b>30</b>	<b>100</b>

The distribution of types of sewing machines used by respondents is shown in Table 6 above, 26.7% of the respondent used electric sewing machine whilst 23.3 percent used hand sewing machine. On the other hand 20 percent and 16.7 percent said they used neatening machine and buttonhole machine respectively. Only two respondents (6.7%) confirmed they use overlock machine. However one respondent (3.3%) said he used the embroidery machine in addition to the sewing machine. One person out of the 30 respondents confirmed having all machine types listed in table 6. It was realised that most garment producers lack the appropriate machine(s) to carry out the production of quality garments.

#### *The quality of garments*

**Table 7: Distribution of Stages at which Respondent Check Quality in Garment Construction**

Quality Check	Frequency	Percentage %
Designing stage	3	10
Cutting stage	6	20
Sewing stage	6	20
Pressing stage	4	13.3
Finished stage	8	26.7
All the above	3	10
<b>TOTAL</b>	<b>30</b>	<b>100</b>

The data in Table 7 shows the states of checking quality in garment construction by respondents in Sekondi - Takoradi. It indicates that eight (26.7%) representing the highest proportion of the respondent checked the quality of garment at the final stage. The table also indicates that only 10 percent each of the respondents checked the quality at every stage of garment construction.

According to Carr and Latgam (1995) quality of garment is essential not only at the finishing stage or during inspection of garment but also during every stage of sewing including the designing stage.

Chuter (1995) also asserts that real quality control comes from the whole organisation from design to dispatch. In view of this assertion it is important for garment producers to check on quality from the cutting stage to sewing stage, ironing stage to the finishing stage. Internationally laid down standards must also be adhered to.

### **CONCLUSIONS AND POLICY IMPLICATION OF THE STUDY**

Majority of garment producers in Sekondi-Takoradi used the 'freehand' cutting method for cutting out. This is a method suitable for individual sewing and is unfavourable for large scale production. Again, most of the garment producers lacked high academic qualifications which could help them to organise the production system better. They did not attend fashion shows both within and outside the country to enable them update their knowledge and skills and also keep them abreast with current fashion. Few garment producers had different types of sewing machines requires for large scale garment production and in addition they had no ready market for ready-to-wear garments. Also variety of supportive fabrics could not be found on the market and this affected the quality of garment produced. The standard of garment manufacturing process and the quality of garment are improving rapidly and garment producers must learn and abreast themselves with standards available in the international fashion industry.

The study has brought to light how garment producers down play on the quality standards of the garments they produce. It must be noted that, from the designing stage to the final pressing (ironing) stage of garment manufacturing, quality of process and internationally accepted standards must be adhered to. If this is not properly checked (supervised) by the appropriate authorities and organisations, the quality of garments produced in the local and international markets would be affected. This will subsequently affect the economy of the country as well.

### **RECOMMENDATIONS**

The study therefore recommends the following:

1. Garment producers associations should employ the services of resource persons to organise monthly tutorials for apprentices who can read and write, and teach them the theoretical aspect of garment production.
2. The association should come together and find a common market to export their products to encourage potential garment producers.
3. Garment producers associations and the Ghana standard Authority should ensure that processes that leads to quality of garment are adhere to.

4. The association should ensure that supportive fabrics for various fabrics are imported and made available to members at cheaper cost so that they can sew to meet international standards.
5. Garment producers should organise workshops to upgrade the skills of its members.
6. Garment producers are encouraged to attend fashion shows to acquire more knowledge on designing.
7. The following Tit-Bits is recommended to improve the quality of garments produced:
  - i) *Designing*
    - Garment producers should take into consideration element and principles of design when constructing garments.
  - ii) *Cutting out*
    - Garment should be cut on grain so that it can drape well.
  - iii) *Supportive fabrics*
    - Lining fabrics should be compatible with the fashion fabric in colour and in texture.
  - iv) *Processes*
    - a. Darts should be of correct length and be in correct position and should be well spread.
    - b. Seams should be flat on outside of garment with no puckering. They should be of even width as well as neatened. The seam should also suit the fabric as well as style.
    - c. Openings should be suitable for garment style and be adequate length as well as strong particularly at the base where most strain occurs.
    - d. Hems should be narrow and suitable for fabric style, and stitching must be as inconspicuous as possible on the right side. Furthermore, it should have well pressed lower edge, smooth and not wavy.
    - e. Sleeves should hang correctly and be correct length and width. The armhole should be well neatened.
    - f. Garments should have care labels.

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